There is little doubt that Washington State will continue to grow at a faster rate than the nation as a whole, fueled by a forward-looking economy and a wide variety of attractive lifestyle options. Whether the state and the communities within it grow with grace depends, in large part, on the ability of state and local governments to keep up with basic infrastructure needs. This policy brief provides an overview of the state’s identified infrastructure needs and funding gaps, focusing on roads and highways and water and sewer utilities.

MEASURING NEEDS: THREE COMPLICATING FACTORS

Maintenance vs. new capacity
For most of the history of Washington State, infrastructure development meant adding systems and capacity to a young, and often frontier, built environment. Paved streets, municipal water and sewer systems, the interstate highway system, major bridges and tunnels all delivered new services and opened opportunities that would allow the state to grow, foster economic development and improve the quality of life. Within the past generation, the pattern of infrastructure needs has changed dramatically. An increasing part of the effort and spending now goes to maintenance and replacement of worn out and outmoded systems, with capacity additions often receiving lower priority. As roads, bridges, pipes and treatment plants reach the end of their useful life, or fail to meet more stringent performance standards, replacement becomes a priority, often at a much higher cost than starting from scratch.

Therefore, any assessment of infrastructure needs must be broken out into two basic categories: maintenance and replacement of existing capacity, and construction of new capacity. These often overlap, as a practical matter, but many funding programs treat them separately and they usually involve different political dynamics.

Levels of service: a moving target
The adequacy of infrastructure is quite a subjective matter. Some outcomes, such as drinking water quality and effluent discharge, are subject to federal regulation, but others, such as household water pressure
and the acceptable level of traffic congestion, do not follow any rigid standards.

The lack of standards presents problems when determining future capacity needs. Patterns of usage change over time in response to lifestyle changes and pricing. For example, per capita vehicle miles traveled, a basic measure of the use of the road system, had been steadily climbing through the 1980s, as suburbs spread out and more women went to work. Then that measure began to flatten out, and has remained stable for the past decade. So whereas demand on roads was increasing faster than population growth for decades, it now seems to be increasing at about the same rate. We may see similar changes in demand on water systems as residential lot sizes (and their landscaped areas) shrink and waterwise gardening becomes more popular.

In addition to shifting of individual preferences, levels of service can be set through public policy. Users of public infrastructure are certainly entitled to safety, but they are not entitled to any particular level of performance. Decisionmakers continually calculate the costs (financial and political) and benefits of expanding infrastructure capacity, and adjust their ideas of acceptable performance accordingly.

**Quality, design and impact mitigation**

As communities become more compact, infrastructure and public facilities become more visible and play a more complex role in the surrounding environment. They cannot be off by themselves, with purely functional designs that emphasize getting the most capacity for the money. In another era, a strip of asphalt would have been a perfectly acceptable road in a low-density residential area, whereas contemporary street designs require curbs, gutters, sidewalks and planting strips. Odor control at wastewater plants and noise mitigation of freeways add costs but do not add capacity.

Much of the discussion of “adequacy” of infrastructure goes well beyond the question of whether the facility performs its basic function, and veers off into more aesthetic territory. So while more elaborate projects certainly can enhance the quality of the community, extensive design and mitigation features drive up costs and limit the number of projects that can be completed within constrained resources.

**STATE HIGHWAYS**

The shift in emphasis from capacity to maintenance/replacement is clearly illustrated in current strategies for state highways. Funding for preservation and maintenance nearly always comes first in agency budgets, with capacity enhancements coming after. But even some major projects do not really add capacity. Two of the most expensive road projects in the state – replacement of the Alaskan Way Viaduct and the SR-520 bridge – will cost billions of dollars and likely add no new general purpose lane capacity.

**Maintenance**

In response to recommendations by the Governor’s Blue Ribbon Committee on Transportation, the state Department of Transportation (WSDOT) adopted a series of benchmarks to measure their efforts to
improve the state’s transportation system (Washington State Department of Transportation 2003 (1)). The benchmarks set goals of zero lanes-miles of pavement in poor condition and zero structurally deficient bridges.

Since 1999, the state has whittled its backlog of repaving from about 3,800 lane miles to around 3,000. Currently about nine percent of the state’s highways are considered to be in poor condition. (Washington State Department of Transportation, 2002 (1)) The number of state bridges rated in “poor” condition, such that they trigger weight restrictions, has fallen from five percent to three percent in the last four years. (Washington State Department of Transportation, 2003 (2))

Compared to other states, Washington does not look too bad in the maintenance category. According to the Federal Highway Administration, Washington ranked 17th in the country in 2002 for the roughness of the pavement on state highways. In the same year, Washington ranked sixth for the fewest number of structurally deficient bridges. (Washington State Department of Transportation, 2002 (1))

### Capacity

Capacity of the road and highway systems is much more difficult to benchmark than pavement conditions. Inadequate capacity and the impact of capacity improvements are usually measured by various indicators of congestion and travel time.

In national congestion rankings, the metropolitan areas of the state seem to have improved in recent years. The Texas Transportation Institute’s annual congestion index used to show the Seattle area among the very worst in the country. Now, however, through some real improvements, as well as changes in measurement methodology, the Seattle area ranks sixteenth worst among the 85 areas studied. Interestingly, the Portland area, which includes parts of Clark County, is now tied with the Seattle area in the overall congestion index. Spokane is way down at number 74. (Schrank and Lomax, 2004)

While congestion measures can usefully point to transportation system deficiencies, capacity questions usually boil down to specific projects that will improve the performance of a corridor. The WSDOT 20 Year Plan lists well over 1100 separate projects under its program for mobility improvement across the state. These range from relatively inexpen-

<table>
<thead>
<tr>
<th>Highway/Location and Improvement</th>
<th>WSDOT Region(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-405 Corridor – Tukwila to Lynnwood Multimodal Improvements</td>
<td>Northwest</td>
</tr>
<tr>
<td>SR 520 Trans-Lake Solution – Multimodal Improvements</td>
<td>Northwest</td>
</tr>
<tr>
<td>I-5 Core HOV</td>
<td>Northwest, Olympic</td>
</tr>
<tr>
<td>U.S. 395 – North Spokane Corridor</td>
<td>Eastern</td>
</tr>
<tr>
<td>New SR 509</td>
<td>Northwest</td>
</tr>
<tr>
<td>SR 167 Extension</td>
<td>Olympic</td>
</tr>
<tr>
<td>SR 16 – Tacoma Narrows Bridge</td>
<td>Olympic</td>
</tr>
<tr>
<td>SR 99 – Alaskan Way Viaduct, Replacement</td>
<td>Northwest</td>
</tr>
<tr>
<td>Spokane I-90 / Central Business District</td>
<td>Eastern</td>
</tr>
<tr>
<td>SR 28 – Wenatchee to I-90</td>
<td>North Central</td>
</tr>
<tr>
<td>I-90 – Snoqualmie Pass East</td>
<td>South Central</td>
</tr>
<tr>
<td>U.S. 101 / I-5 – HOV</td>
<td>Olympic</td>
</tr>
<tr>
<td>I-5 – Columbia River Interstate Crossing</td>
<td>Southwest</td>
</tr>
<tr>
<td>I-5 – Oregon State Line to I-205 Junction</td>
<td>Southwest</td>
</tr>
<tr>
<td>I-5 – SR 501 to Toutle River Rest Area Vicinity</td>
<td>Southwest</td>
</tr>
<tr>
<td>I-5 – Toutle River rest area Vicinity to Rush Road – Increase Capacity</td>
<td>Southwest</td>
</tr>
<tr>
<td>U.S. 395 / I-82 to I-182 – Widen to Six Lanes</td>
<td>South Central</td>
</tr>
<tr>
<td>SR 104 Kingston – Widen from Two to Four lanes</td>
<td>Olympic</td>
</tr>
<tr>
<td>I-5 – 72nd to Pacific Avenue – Add Core HOV Lanes</td>
<td>Olympic</td>
</tr>
<tr>
<td>I-5 – Pacific Avenue to Port of Tacoma – Add Core HOV Lanes</td>
<td>Olympic</td>
</tr>
<tr>
<td>I-5 – Rush Road to Thurston County Line – Increase Capacity</td>
<td>Southwest</td>
</tr>
</tbody>
</table>

Source: Washington State Department of Transportation, 2002 (2)
sive ramp improvements or signalizations, to multi-billion dollar projects.

Table 1 shows the 21 projects estimated to cost in excess of $200 million.

(Washington State Department of Transportation, 2002 (2)

The current WSDOT Highway Plan calls for spending $57 billion over the next 20 years, or an average of $5.7 billion per biennium. (See Table 2.) Available revenues, however, fall well short of this target. In the 2003-2005 biennium, WSDOT will spend a total of about $2.6 billion on highways, or less than half of the amount called for by the plan, with the shortfall coming disproportionately from the capital side. The 20 Year Plan calls for about 93 percent of highway expenditures to go towards construction, whereas the 2003-2005 WSDOT highways budget shows about 83 percent going to construction, and the balance going to maintenance and operations.

(Washington State Department of Transportation, 2002 (2); Washington State Department of Transportation, 2002 (3))

The most expensive projects in the 20 year plan are mostly found in the Puget Sound region, and the plan relies on local funding through the Regional Transportation Improvement District (RTID) authorized by the Legislature and created by King, Snohomish and Pierce Counties. The current RTID plan, which has yet to go before the voters, would add as much as $11.7 billion to WSDOT’s highway construction budget during the period of 2005 to 2019 (Regional Transportation Improvement District, 2004). But even if the RTID is adopted, it will not fund all projects in the Puget Sound area in the 20 year plan, and it does nothing for unfunded projects in the rest of the state.

**LOCAL ROADS**

Assessing the needs of city and county road systems is extremely difficult. Each jurisdiction has its own capital facilities program (CFP), usually assembled on a rolling six year cycle, as required by the Growth Management Act (GMA). The measurement tools are not always consistent among jurisdictions, so adding together projected needs often means combining apples and oranges. Furthermore, the GMA requires those CFP’s to be “resource constrained” – that is, they should only list projects for which the jurisdiction can identify funding.

In 1998, the State Public Works Board undertook the Local Government Infrastructure Study, which attempted to combine the capital needs of all cities, counties and utility districts in the state.

(Washington State Public Works Board, 1999) To do this the study

<table>
<thead>
<tr>
<th>Table 2: The WSDOT 20 Year Plan Covers the Whole Range of Operations and Construction Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In millions of 2001 dollars</strong></td>
</tr>
<tr>
<td><strong>Preservation</strong></td>
</tr>
<tr>
<td>Pavement</td>
</tr>
<tr>
<td>Bridges</td>
</tr>
<tr>
<td>Retaining walls &amp; other structures</td>
</tr>
<tr>
<td><strong>Preservation Total</strong></td>
</tr>
<tr>
<td><strong>Improvements</strong></td>
</tr>
<tr>
<td>Mobility</td>
</tr>
<tr>
<td>Safety</td>
</tr>
<tr>
<td>Economic initiatives</td>
</tr>
<tr>
<td>Environmental</td>
</tr>
<tr>
<td><strong>Improvements Total</strong></td>
</tr>
<tr>
<td><strong>Maintenance Total</strong></td>
</tr>
<tr>
<td><strong>Operations Total</strong></td>
</tr>
<tr>
<td><strong>Total 20 Year Highway Plan</strong></td>
</tr>
</tbody>
</table>

*Source: Washington State Department of Transportation, 2002 (2)*
team requested the CFPs of all jurisdictions, and then made adjustments for inconsistent data and extrapolations for missing data. Table 3 shows the total needs, available funding and funding gap for roads and bridges maintained by cities and counties.

The total gap of $1.69 billion represents projects that jurisdictions fully intend to build but for which funding sources are identified but not firmly nailed down. Each jurisdiction has a longer list of projects they would like to build, but for which they cannot even guess at a funding source and therefore have excluded from their “resource constrained” CFP. Hence, the real gap would be much larger than that shown in the study.

Another way to uncover capacity deficiencies at the local level is through the concurrency requirements of the GMA. The GMA requires that jurisdictions provide infrastructure concurrent with new housing and commercial development. If infrastructure becomes overburdened and cannot be expanded in a timely way, jurisdictions must halt development that might make the situation worse. Nearly all jurisdictions planning under the GMA have concurrency programs in place, but they vary widely in their measurements and standards.

Even with its unevenness, concurrency has had an impact on development. In a survey by the Puget Sound Regional Council of jurisdictions in King, Pierce, Snohomish and Kitsap Counties, eight jurisdictions reported they had denied projects because of inadequate local roads, eleven jurisdictions reported delaying developments until road projects were completed, and twelve jurisdictions compelled developers to change the scope of their projects. (Puget Sound Regional Council, 2003)

In King County, despite a recent loosening of standards, a large part of the Soos Creek area near Kent remains off limits to development due to congestion on local streets. In all of unincorporated King County about 1800 potential housing units cannot be built until concurrency requirements are met. (King County Department of Transportation)

### WATER SYSTEMS

Nearly 90 percent of Washington residents get their drinking water from one of about 16,000 water systems. These range from private systems serving just two homes, to the Seattle system, which directly serves over a half million people and provides water to cities and water districts serving hundreds of thousands more. Another 600,000 state residents get their water from a household well. (Washington State Department of Health, 2002) Table 4 shows water systems in the state in 2002:

Like road systems, the adequacy of water systems has two parts: capacity and quality. But the analogy ends there, since, while a rough road is still useable, unsafe drinking water can pose major health hazards. Moreover, the vast majority of roads are maintained by relatively large

---

**Table 3: City and County Roads and Bridges Funding Gap**

<table>
<thead>
<tr>
<th></th>
<th>Roads</th>
<th>Bridges</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Needs</td>
<td>$3,700</td>
<td>$390</td>
<td>$4,090</td>
</tr>
<tr>
<td>Available Funding</td>
<td>$2,150</td>
<td>$250</td>
<td>$2,400</td>
</tr>
<tr>
<td>Funding Gap</td>
<td>$1,550</td>
<td>$140</td>
<td>$1,690</td>
</tr>
</tbody>
</table>

*Source: State of Washington Local Government Infrastructure Study*
governments that have the necessary financial and technical capacity to maintain them, while tens of thousands of homes are served by very small private water systems managed by owners or volunteers.

The quality and safety of drinking water systems is governed by the Federal Safe Drinking Water Act (SDWA). (Group A systems must comply with SDWA; Group B systems are exempt.) The 1996 amendments to the SDWA placed a high emphasis on improving the technical, managerial and financial capacity of water systems, so they will be better able to comply with more stringent standards.

Despite the enhanced capacity of small water systems – 98 percent of Group A systems now have certified operators – the regulatory compliance bar keeps being raised. Prior to 1996, water systems needed to track 23 possible contaminants. They now need to track over 100 possible contaminants, and by 2010 they may need to track as many as 130. These and other requirements add up to a substantial burden of sampling, testing, inspection and paperwork that can easily overwhelm small systems. (Washington Water Supply Advisory Committee, 2003)

While the State Department of Health has programs to provide technical assistance, the large number of systems – over 4200 Group A systems must comply with SDWA – spreads this assistance very thin. (Washington State Department of Health, 2002)

The capacity of water systems has been a growing concern, especially in the rapidly-growing areas served by groundwater. The large municipal surface water systems were built with substantial capacity and have been able to keep up with growth. And because growth happens in these systems at the margins, they can use conservation throughout the system to free up capacity for new hook-ups. Their size also gives them the rate base and bonding capacity to finance improvements with little difficulty.

---

**Table 4: Water Systems in Washington State**

<table>
<thead>
<tr>
<th>System Type</th>
<th>Number of Systems</th>
<th>Population Served</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group A Community Systems</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serving over 1000 homes</td>
<td>191</td>
<td>4,442,237</td>
</tr>
<tr>
<td>Serving 100 to 999 homes</td>
<td>516</td>
<td>455,898</td>
</tr>
<tr>
<td>Serving 15 to 99 homes</td>
<td>1,626</td>
<td>146,283</td>
</tr>
<tr>
<td><strong>Total Group A</strong></td>
<td>2,333</td>
<td>5,044,418</td>
</tr>
<tr>
<td><strong>Group A Non-community Systems</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serving businesses and non-residential institutions</td>
<td>1,903</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Group B Systems</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serving 2 to 15 homes</td>
<td>12,566</td>
<td>107,301</td>
</tr>
<tr>
<td><strong>Private wells</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serving one home only</td>
<td>n/a</td>
<td>600,000</td>
</tr>
</tbody>
</table>

*Source: Washington State Department of Health*
ment of Ecology (DOE) was authorized to institute a “two line” process of approving water rights. Under the old system, water right applications were addressed strictly in the order received, so complex applications would hold up the line and create a major backlog. Under the new system simple applications for changes in water rights are processed separately from complex applications. As a result, DOE went from processing about 250 applications in 2001 to over 700 in 2003. (Washington State Department of Ecology)

A second important change in water law allows water rights to be transferred more easily and allows water to be used outside of the geographic area of the original right. So, a water district can now acquire a water right from a business, mine, farm or other holder and use that water throughout its service territory. This allows water districts to expand their reach and makes it easier to merge small systems into larger, more technically and financially secure ones. (Washington State Legislature, 2003)

Among the six-year CFPs of cities and water districts in 1998, the Local Government Infrastructure Study identified a total of $1.68 billion in capital needs and $1.1 billion in available funding, resulting in a funding gap of $580 million. (Washington State Public Works Board, 1999) This figure understates the needs of the state’s water systems, since it includes only cities and water districts and does not include the many private water systems that have the greatest need for upgrading to current standards and the least financial ability to do so.

WASTEWATER

More than perhaps any other infrastructure, the provision of wastewater treatment services determines patterns of growth. With their large pipes and reliance on gravity and pumping stations, conveyance systems are very expensive and require a large number of hook-ups for financial feasibility. Treatment plants are also very expensive and difficult to site and get permitted. Because of the cost of providing it, many urbanized areas of the state still do not have sewer service, making it difficult for them to accommodate infill and redevelopment.

Like larger water utilities, larger wastewater systems can finance expansion and renovation with revenue bonds that are repaid through rates. The problem they face is allocating costs for expansion of the system. Because they are so difficult to build, wastewater plants are designed with substantial excess capacity that can accommodate decades of growth. But once that capacity is used up, who pays for expansion? Growth should pay for itself, but construction bonds will need repayment long before the growth arrives.

The large wastewater utilities in the state are spending huge amounts of money to expand capacity and bring their systems up to date. King County estimates it will spend $1.7 billion over the next 30 years on new treatment and conveyance facilities and to stop overflows from combined sewers. (King County Department of Natural Resources and Parks, 2004) Pierce County plans to spend $304 million, most of which goes to its Chambers Creek treatment plant. (Pierce County Department of Public Works and Utilities, 2002) In Clark County, expansion of the Salmon Creek system will cost up to $80 million. (Clean
Water Community Partnership) Even with no major new facilities, the City of Spokane budgets $25 million this year for capital improve-
ments. (City of Spokane Wastewater Management, 2004)

At the local level, cities and sewer districts rely on hook-up charges to extend their systems, but they often struggle to expand into already-
developed areas that have septic systems. In these areas, many of which are aging, low density neighborhoods with redevelopment poten-
tial, utilities must use local improvement districts (LIDs) to spread the cost of new sewer service. But current residents have little incentive to approve such financing if their septic systems still function. As a re-
sult, developable properties remain vacant unless the land owners or developers can afford to extend the sewer line themselves.

In cases where developers cannot successfully form an LID, they may be able to take advantage of a latecomer process, where subsequent development that hooks into the new sewer line repays the developer who initially paid for the line. Not all jurisdictions, however, have late-
comer processes.

The Local Government Infrastructure Study identified a total of $1.82 billion in wastewater capital needs and $1.34 billion in available fund-
ing, resulting in a funding gap of $480 million. (Washington State Public Works Board, 1999) This probably understates the need sub-
stantially, since a resource-constrained six-year CFP would not likely include sewer extensions for which LIDs or private funding had not been proposed. Completing sewer service to all the urban growth areas of the state, as envisioned by the GMA, will be an enormous and ex-
pensive undertaking.

CONCLUSION

The challenge of accurately assessing infrastructure needs in the state reflects the fragmented governance and unclear standards and objec-
tives under which infrastructure planning takes place. Local decision-
making tends to favor the needs of current residents, and the visible deterioration or technical inadequacy of existing facilities tends to fa-
vor replacement and renovation. But the state keeps growing, and every new job and resident comes with a new increment of infrastruc-
ture need. The following papers in this series will examine the tug and pull of infrastructure planning and financing, and identify ways around these conundrums.
REFERENCES


Clean Water Community Partnership (Clark County). Salmon Creek Phase Four Expansion.

King County Department of Natural Resources and Parks. 2004. King County Regional Wastewater Services Plan.

King County Department of Transportation. Interview with Richard Warren, October 26, 2004

Pierce County Department of Public Works and Utilities. 2002. Pierce County Unified Sewer Plan.


Washington State Department of Transportation. 2003 (3). 2003 Legislative Session Transportation Results.


Washington’s Infrastructure Needs: Current Funding and Financing Tools

State and local agencies pay for infrastructure improvements through combinations of user fees, general funds, operating revenue and grants, and leverage these funds through various debt instruments. Utilities, because they have a defined and predictable rate base, can mostly finance system improvements through their customers’ monthly bills, whereas transportation agencies rely on a wider variety of sources. This paper provides an overview of the basic fund sources and financing tools available to state and local governments, followed by a description of how those tools are used by various agencies.

Discussion of infrastructure finance frequently combines the topics of funding and finance. In the descriptions below, funding refers to the generation of revenue through taxes, fees or grants. Financing refers to mechanisms for borrowing against those revenue streams to gain earlier access to them.

CURRENT FUND SOURCES

Transportation User Fees

User fees create a connection between use of a facility and the funding of its construction and maintenance. The ideal user fee links the amount paid precisely to the amount the system is used. With most real-world fees, however, the connection is not perfect. For example, a fuel efficient car may take up the same amount of road space as a gas guzzler, but pay less tax. Even imperfect user fees tend to be politically more popular than general taxes. The primary transportation user fees are:

Motor fuel tax. The Motor Fuel tax (generally known as the “gas tax”) in Washington State is levied on a per-gallon basis, collected from the fuel distributor and, along with federal gas taxes, built into the price at the pump. Currently, sales taxes are not levied on motor fuel by either state or local governments. The 18th Amendment to the State Constitution restricts the use of motor fuel tax revenue to “highway purposes.” This has been interpreted to cover all roads and adjacent sidewalks, as well as the state automobile ferry system, which is considered part of the state highway network.
With the addition of five cents per-gallon in 2003, the motor fuel tax in Washington is currently $0.28 per gallon. A statutory distribution formula sends that revenue to a number of state and local agencies. Figure 1 shows the distribution among agencies and levels of government. Descriptions of the programs are provided below. (Counties are authorized, subject to a vote, to levy a local fuel tax. See description below)

At 28 cents per gallon, Washington has the ninth highest state fuel tax in the country, after Hawaii, Illinois, Nevada, New York, California, Wisconsin, Rhode Island and Florida. The average among the states is about 20 cents per gallon, with the lowest tax at 8 cents in Alaska. (Washington State Department of Transportation, 2004a)

While the motor fuel tax is as popular as a tax can be, it suffers from two weaknesses as a revenue source. First, as a flat fee per-gallon, revenue does not rise with inflation. The tax was raised to 23 cents in 1991, and by 2003 the purchasing power of that tax had shrunk to about 18 cents. So, even with substantial growth in the state, and the pressures that growth puts on the transportation system, total fuel tax revenues remained flat for the past decade. The “nickel tax” added in 2003 barely brought the purchasing power of the fuel tax back to 1991 levels. (Washington State Transportation Commission, 2004)

A second weakness shows up in the improved fuel efficiency of vehicles: as vehicles become more efficient, less tax is collected per vehicle mile. While the popularity of light trucks in the past decade has slowed the trend toward more fuel efficiency, continued high gas prices may shift demand to more fuel efficient cars, shrinking fuel tax collections. (United States Department of Transportation, 2004)

License and weight fees. The second largest source of revenue for the State Department of Transportation (WSDOT) consists of a variety of vehicle licensing fees. Although Initiative 776 eliminated most of the Motor Vehicle Excise Tax (MVET) and local option license fees, the WSDOT still expects to collect $674 million in the next biennium. This includes revenue from a 15 percent increase in truck weight fees adopted as part of the “nickel package” in 2003. Because the 18th Amendment does not apply to these funds, they can support non-highway programs, such as the State Patrol. The proposed 2005-2007 budget does call for spending 54 percent of licensing revenue on WSDOT programs. (Washington State Transportation Commission, 2004)
Most license fees do not draw much of a connection between the fee level and the actual use of transportation systems. A flat fee collects the same revenue from a vehicle driven 1000 miles a year and a vehicle driven 30,000 miles. The previous MVET, which based fees on the value of the vehicle drew no relationship at all. The state’s truck Gross Weight Fee does vary by reported gross weight – a 42,000 pound truck pays $609 per year, and a truck straining the scales at 105,000 pounds pays $3,400 per year. (Washington State Department of Licensing, 2004)

Tolls. The state has used tolls to fund bridges in various parts of the state, but no tolls are currently in effect. Tolls are typically used to pay off construction bonds, and once the bonds have been retired, the tolls are lifted. The $850 million cost of the new Tacoma Narrows Bridge is being financed largely with tolls, which will initially be set at $3.00, collected in the eastbound direction only. Planning for a replacement bridge on SR-520 across Lake Washington assumes financing through tolls. (Washington State Department of Transportation, 2004b)

Tolls provide a direct connection between facility use and fee. They have proved politically acceptable for funding new capacity, but very problematic for raising revenue on existing facilities. Tolls work best when motorists have limited options to by-pass the toll road or bridge, or when those options are very slow. In various parts of the country toll roads have been built parallel to existing congested freeways, offering a fast alternative for those willing to pay.

Intergovernmental Grants and Loans

State and local transportation agencies rely to a substantial degree on infrastructure funding from higher levels of government. States receive grants from the federal government and local governments receive grants from both state and federal agencies. Granting programs originate in intergovernmental relationships where the higher level of government:

1. Has a direct interest in infrastructure, but does not want to build or own it. Example: the Interstate Highway System, built by states with 90 percent federal funding.

2. Has issued a regulatory mandate that requires investment, and therefore feels an obligation to take the political heat for funding that mandate. Example: federal aid for local sewage treatment, in response to the Clean Water Act.

3. Is asserting leadership in a certain area by offering funding assistance. Example: the state’s Transportation Improvement Board, which funds regionally-significant local roads.

4. Provides a sort of insurance against failure or assistance in response to disaster. Example: state assistance to very small water systems to ensure safety.

On the surface, intergovernmental grants seem like a no-brainer: free money! But because they often promote specific objectives and tend to come with strings attached, they can distort priorities and divert resources. Lower priority projects can move to the head of the line sim-
ply because they qualify for state or federal assistance. While this assistance may allow agencies to leverage their own funding farther, the resulting projects may not be the best use of those funds.

Federal and state agencies have grant and loan programs for just about any conceivable infrastructure need. To help local governments find available money, the State of Washington has established an Infrastructure Assistance Coordinating Council which maintains a website covering most state programs. The website (www.infrafunding.wa.gov) lists nearly 100 grant programs, in addition to numerous loan and technical assistance programs. Many of these programs serve as conduits for federal money. Among the grant programs, 26 provide transportation funding, 11 provide water and sewer funding and 29 provide environmental and recreation infrastructure funding. (Infrastructure Assistance Coordinating Council, 2003)

Most grant and loan programs operate on a competitive basis, with applicants submitting requests in response to specific criteria and waiting for a decision. The federal government does still have a tradition of earmarking funding for specific projects. Intergovernmental programs rarely fund most or all of a project, and the outside assistance must be matched with other funds.

**Property tax levy lid lift**

Local governments are subject to strict limits on how much they can raise property taxes each year. They can, however, ask voters for a temporary increase in property taxes to fund needs such as infrastructure. Although state law does not require it, most levy lid lift propositions set both a time limit for the levy and a specific purpose for the new revenues. Levy lid lifts have the advantage of only requiring a 50 percent majority vote, as opposed to the 60 percent majority required for a general obligation bond issue backed by a property tax levy.

**Development fees**

Most brand new local roads are funded and built by land developers as part of their subdivisions. Cities and counties set standards for these roads and approve the plans for them, but the developer pays the whole cost and then turns the roads over to the city or county as public right-of-way. Similarly, new sewer lines and water lines within subdivisions are paid for by the developer and turned over to the local utility.

New developments do have impacts beyond their borders, and through the State Environmental Policy Act (SEPA) and the Growth Management Act (GMA), local governments can collect money from developers to finance improvements needed to accommodate the new development. Road mitigation fees are based on an assessment of the traffic impact and the identifiable improvements. Sewer and water systems usually have a standard hook-up charge that covers the average cost of adding one new unit to the overall system. Mitigation and hook-up fees can vary widely among jurisdictions.

Courts have clearly stated that local governments cannot require developers to fund existing infrastructure deficiencies. For example, new development cannot be required to pay all the costs of improving a nearby intersection that already operates beyond its capacity.
Local Improvement Districts

Property owners can share the cost of building or upgrading their local infrastructure by forming a local improvement district (LID). During the LID process, each property owner that will benefit from the improvement is assigned a share of the cost, which is paid over time through property taxes. LIDs are often used to bring formerly underdeveloped areas up to urban standards with improvements such as sewer lines, sidewalks or buried utilities. (LIDs are covered more extensively in a subsequent brief in this series)

Real Estate Excise Tax (REET)

Cities may levy a tax on real estate transactions to fund capital projects. All cities may charge one-fourth of one percent, and use these funds for items in their capital improvement plans. Cities planning under the GMA may levy an additional quarter percent and must also use the funds only for capital facilities. The statutes authorizing the REET, as well as subsequent Attorney General opinions, carefully define the sorts of things that are appropriate uses of REET funds. (Municipal Research and Services Center, 1999)

Local option transportation taxes

As part of a larger transportation funding increase, the 1990 legislature authorized several local option funding sources for cities and counties. Three of these, a head tax, the street utility charge and the vehicle license fee, have been invalidated, and two remain, but are in little use.

Counties can, with voter approval, levy a gas tax at up to 10 percent of the state rate (i.e. up to 2.8 cents currently). The proceeds would be divided by a formula among the county and the cities within it, with the county getting a larger share. Only a few counties have tried to levy this local fuel tax, and none have succeeded in getting voter approval.

Cities and counties (in unincorporated areas only) can levy a tax on commercial parking. The statute leaves jurisdictions quite a bit of discretion about how to structure the tax. A few cities, including SeaTac and Bainbridge, have implemented the tax.

General Funds

State and local governments will use general fund revenues to pay for infrastructure costs that cannot be loaded onto dedicated funding sources. Unlike local governments, state government does not ask for a property tax increase to accompany a general obligation bond issue, so it must use general fund revenues to repay bonds issued to build facilities like schools and state parks. For local governments, their share of fuel tax revenues falls well short of the needs of their road systems, and they must supplement fuel tax receipts with general funds.

Various proposals for infrastructure funding really just amount to diversion of general fund revenues. For example, forgiving sales tax on construction lowers the cost of infrastructure projects, but also lowers sales tax collections that go to the general fund. Similarly, dedicating sales tax collected on residential or commercial construction to infra-
structure funding, while logical, simply diverts those revenues from the general fund. And any councilmanic bonds a city has issued without an identified revenue source must be serviced with general funds.

**Bonding**

Most agencies borrow extensively for infrastructure projects for two basic reasons. First, revenue streams cannot support pay-as-you go financing of large projects. Second, future beneficiaries of infrastructure should have the opportunity to help pay for it. Governments can use several types of bonding.

**General obligation bonds**

State and local governments can issue general obligation bonds for most purposes. At the local level these bonds are backed by an identified revenue stream, such as a special property tax levy. They are also backed by the full faith and credit of the issuing government, so that if the revenue source falls short for any reason, the government must dip into its general fund to repay the bonds. In Washington State, cities and counties must get a 60 percent voter approval in order to issue property tax-backed general obligation bonds, but the state can issue them without any voter approvals.

**Councilmanic bonds**

These general obligation bonds are issued by cities and counties and are backed by their full faith and credit. They do not require voter approval or a dedicated revenue stream, but are subject to a strict ceiling. Debt service on councilmanic bonds comes out of the city or county general fund, although the projects financed by them may have an identifiable revenue stream. These bonds are often used when the revenue stream is not quite predictable enough to back revenue bonds.

**Revenue bonds**

These bonds are backed by a guaranteed stream of revenue generated by the project itself, but are not backed by the full faith and credit of the government and do not require a vote of the people. Utilities typically fund their system improvements with revenue bonds, covering debt service through the utility bills of the captive ratepayers. Transportation projects, including ferries, that charge tolls can issue revenue bonds backed by the tolls. Washington State, however, has not used toll-backed revenue bonds since the 1970s, preferring lower-rate general obligation debt. (Transportation Economic Partnerships Office)

For a utility or other agency to use revenue bonds the income stream must be very secure and predictable. Because issuers do not back revenue bonds with their full faith and credit, they carry a higher interest rate than general obligation bonds.

**“Double barreled” gas tax bonds**

WSDOT finances construction projects by selling bonds that are repaid with gas tax revenue. These are known as “double barreled” bonds, since they are backed by both the gas tax and the full faith and credit of the State. So, if the gas tax does not produce enough revenue, the State services the debt through the general fund. But because the bonds are
primarily backed by the gas tax, they are not subject to the State’s constitutional debt ceiling. (Transportation Economic Partnerships Office).

**INFRASTRUCTURE FUNDING AND FINANCING STRATEGIES**

**State highways**

The revenue dedicated to WSDOT’s highway budget comes primarily from three sources: fuel tax, licenses and permits, and federal funds. But because of the use of bonding, there is a big difference in any given year between the cash flowing into WSDOT and the outflow of capital expenditure dollars. In 2003 about 35 percent of fuel tax income was dedicated to servicing existing debt. This old debt will taper off, but, at the same time, the new nickel fuel tax will be leveraged very aggressively with debt. This will substantially increase the funds available for capital projects in the next few years, but eventually the debt load catches up, and by 2015, about 45 percent of fuel tax revenue will be needed to service debt. (Washington State Transportation Commission, 2004)

The “nickel package” of fuel tax increase represents a significant new direction in state highway funding. The legislation that authorized the tax also contained specific lists of projects, and obligates WSDOT to deliver those projects. Thus, the heavy bonding: since the projects are all identified, there is no reason to wait until the cash shows up. The WSDOT budget makes a clear distinction between its ongoing capital and maintenance programs and the new nickel fund projects. (Washington State Transportation Commission, 2004)

**Local Roads**

Cities fund their local street program primarily through a combination of fuel tax distribution, general funds and developer contributions. Counties get a fuel tax distribution and also have a separate property tax levy in unincorporated areas that is dedicated to roads. Since larger subdivisions tend to be built in unincorporated areas, counties in urbanized areas also receive substantial developer contributions for roads. In addition to these local funds, cities and counties have access to three additional sources:

*Transportation Improvement Board (TIB)*. This state agency receives 3.04 cents out of the 28 cent state fuel tax, and uses those funds to assist local projects throughout the state. TIB funded projects are generally of regional significance and include matching funds. In 2003, 149 projects were completed using TIB funds. The value of these projects totaled $339 million, $109 million of which came from the TIB. (Transportation Improvement Board)

*County Road Administration Board (CRAB)*. This program aims primarily at preserving important arterials in rural parts of the state. The CRAB gets 1.03 cents out of the 28 cent fuel tax, and targets those funds primarily at smaller counties. For example, in 2003, Pend Oreille County and Garfield Counties received $1.3 million and $1.4 million, respectively, while King and Snohomish Counties received only $295,000 and $117,000 respectively. (County Road Administration Board)
Regional Transportation Planning Organizations (RTPOs). These regional bodies, also known as Metropolitan Planning Organizations, fulfill important growth management and planning functions. They are also, however, conduits for federal transportation assistance aimed at local governments. They operate competitive processes through which member agencies (i.e. cities, counties, transit systems) apply for funding assistance.

Sewer and water systems

Public utilities have the advantage of a reliable rate base onto which they can load a reasonable amount of capital costs. Users have no choice but to join the system and pay their bills, so simply adding to those bills generates a steady income to pay for ongoing maintenance and debt service on borrowing. Utilities generally use revenue bonds since the income stream for debt service is reliable and they do not have to go before the voters. These systems are, however, governed by elected officials – councilmembers or district commissioners – so there is some practical limit to how much they can raise rates to fund improvements.

Public utilities also use hook-up fees on new development to fund system expansion. These fees can get quite high in some areas, and by themselves have been known to inhibit development. From a political perspective, it is far better to load capital improvement funds onto new development than to load them onto the bills of current ratepayers.

Sewer systems are eligible for grant and loan assistance. The State Department of Ecology offers low interest loans through the Centennial Clean Water Fund and the State Revolving Loan Fund. (Washington State Department of Ecology) More general infrastructure financing programs, such as Public Works Trust Fund loans and Community Development Block Grants can be used for wastewater systems. Introducing sewers into already developed areas on septic systems usually requires an LID.

Private water utilities have much more limited access to financing for improvements. Community covenants may make provision for maintenance of a water system, but such covenants are often difficult to enforce. Community water systems have access to the Drinking Water State Revolving Fund, which provides low interest loans for capital improvements aimed at safety and regulatory compliance. (Washington State Department of Health)

CONCLUSION

The first theme that emerges from a description of infrastructure finance is complexity. For any agency looking to expand or rebuild its capital facilities, revenue from its immediate sources – taxes, fees and rates – is just the beginning of financing a project. Those funds need to be leveraged by borrowing against future revenue streams, seeking matching grants or loans from higher units of government, and securing reasonable contributions from private development. One look at the funding sources for a major arterial expansion, for instance, shows what a large task it can be to stitch together project financing.
A second central, and often elusive, theme of infrastructure financing is tying funding sources to benefits, in terms of both time and geography. Individuals, businesses and institutions are much more likely to favor funding for projects that will improve their neighborhood and for which they will pay a reasonable portion of the bill. Yet the tools to make this nexus are often missing or difficult to use. The next paper in this series will examine tax increment financing, local improvement districts, latecomer fees and other ways to capture the benefits of infrastructure investments. It will also look at innovative user fees, such as High Occupancy Toll (HOT) lanes that capture the value of improvements.

REFERENCES


Washington State Department of Licensing. CMB Gross Weight Fees


Washington State Department of Transportation. 2004b. SR-520 Bridge Replacement and HOV Project (brochure).


Washington’s Infrastructure Needs: Innovative Funding, Financing and Management Tools

As state and local government agencies find traditional funding and financing mechanisms inadequate to meet fully our infrastructure needs, they increasingly seek out new ways to pay for projects. This paper reviews new sources of money available to agencies and ways that the agencies may make more efficient use of their existing sources. Some of these tools and techniques have been around a long time but are seldom used, while others are truly new. They all, however, reflect a basic reality: we cannot continue to rely so heavily on broad, general taxes and fees.

The tools described fall into three categories. First are new revenue sources, mostly tied to some user benefit. Second are planning and management techniques designed to get greater efficiencies from existing revenues. Third are techniques that involve public-private cooperation.

NEW FUND SOURCES – VALUE CAPTURE

The availability and capacity of infrastructure – roads, sewer, and water – determine the degree to which property can be developed, and, therefore, its value. For example, residential property that connects to water and sewer systems is worth more than property that must rely on wells and septic systems, since public utilities increase the density of development the property can accommodate. Similarly, commercial property with good freeway access is worth more than isolated parcels.

The philosophy of “value-capture” is to take advantage of the increased value of property to fund the infrastructure that provided that increase in the first place. In other words, let development pull itself up by its own bootstraps.

The primary attraction of value capture techniques lies in their inherent fairness: those who benefit from an investment help pay for it. And if the program is well-structured, property owners will gladly participate,
since the increased value of their land will more than pay for the infra-
structure contributions they must make.

The trick, as shown in the three descriptions below, is to tie the need
for funds with the perceived benefit to the property owners. Three
types of value capture treat this problem differently. Table 1 shows the
advantages and disadvantages of each.

**Local Improvement Districts**

Although hardly an innovative technique, local improvement districts
(LIDs) will be key to redevelopment of older residential and commer-
cial areas that lack basic infrastructure like sewer service and side-
walks. LIDs are often challenging to implement but the results can
definitely be worth the headache. (Municipal Research & Services
Center, 2003)

Either a local government (city, county, special district) or a group of
property owners can initiate formation of an LID. If, after a complex
series of steps, the project and the LID to pay for it are approved, a fur-
ther process is undertaken to determine how much each property owner
will pay. The LID then becomes the basis on which the government
sells bonds to finance the project. These bonds are repaid by the LID
beneficiaries through annual property taxes, or, for water and sewer
lines, through utility bills.

Approval of an LID does not have to be unanimous, so some property
owners who disagree will end up paying anyway. But in no case will a
property owner have to pay more in assessments than their property
gains in value.

The primary difficulty with LIDs is that property owners must begin
paying for improvements immediately even though they may not cash
in on them for many years. For example, the owner of a large property
with a septic system may not want to pay for a new sewer line if their
septic system still functions and they do not plan to sell their property
soon.

**Tax Increment Financing**

The Holy Grail for urban revitalization experts throughout the country,
tax increment financing (TIF) has faced significant legal obstacles in
Washington State, due to various constitutional prohibitions. State vot-
ers have rejected constitutional amendments that would have allowed
the kinds of TIF programs used in other states, and recent court deci-
sions have reinforced the difficulty.

Under TIF, an infrastructure improvement is financed with the in-
creased tax revenues generated by property development in the vicin-
ity. For example, if a city builds a new park next to a vacant lot, the
owner of that lot may respond to the new amenity and build an apart-
ment building. Under TIF, the new property tax revenue coming from
the apartment building goes to help pay for the park, while taxes at the
rate previously collected on the vacant lot continue to go to their usual
jurisdictions.

Washington’s current TIF statute, adopted in 2001, attempts to get
around the various constitutional and political objections, but has not
proved to be very workable. Because it exempts property taxes going to the state school fund, and allows capture of only a portion of the taxes going to other jurisdictions, it simply does not capture enough revenue to pay for major improvements. (Jay Reich, 2002; Jeff Nave, 2003)

### Latecomer Agreements

Like an LID, a latecomer process requires property owners to help pay for a fair share of improvements they benefit from. But there are two crucial differences. First, in a latecomer process, the initial property owner who benefits from the improvement pays the entire cost up front, with reimbursement from other benefiting property owners coming later. Second, property owners pay their share only when they redevelop. So while the local government may require a latecomer process and may administer it, the transactions end up being between landowners (which may include governments).

Latecomer processes are optional under state law, and many local jurisdictions make no provision for them. Without a latecomer process, a property owner who funds infrastructure ends up subsidizing developers who hook into the new system or road subsequently. Absence of latecomer processes inhibits development of property in areas that need infrastructure upgrades, since property owners will wait for the other

<table>
<thead>
<tr>
<th>Application</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Improvement Districts</td>
<td>Costs are shared fairly by all who benefit. Assessments paid over time to lessen the burden.</td>
<td>Complex to establish. Subject to challenges by people who do not want to participate or who feel their assessment is unfair.</td>
</tr>
<tr>
<td>Tax Increment Financing</td>
<td>Does not cost property owners anything directly. Does not require approval or consent of property owners.</td>
<td>Risk to local governments that revenues will not materialize and bond payments will fall to general fund. Other taxing districts may not want to see their revenue being diverted to projects they do not benefit from.</td>
</tr>
<tr>
<td>Latecomer Agreements</td>
<td>Captures value only when that value is realized. Does not place a burden on property owners who do not need the new infrastructure.</td>
<td>Requires large, up-front payments by initial developer. Administrative challenge for local governments.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Table 1: Value-Capture Mechanisms</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Application</strong></td>
</tr>
<tr>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Local Improvement Districts</td>
</tr>
<tr>
<td>Tax Increment Financing</td>
</tr>
<tr>
<td>Latecomer Agreements</td>
</tr>
</tbody>
</table>
owners to move first and give them a free ride. The existence of a late-comer process may spur property owners to form an LID and get the improvements financed by everyone all at once.

NEW FUND SOURCES – CONGESTION PRICING

Tolls have been used in Washington primarily to fund bridge construction and will be used to fund the new Tacoma Narrows bridge. Washington has never had the kinds of toll roads that exist on the East Coast and in other parts of the world. That could change.

Tolls work best in cases where there do not exist attractive free alternatives. If a new bridge saves a half hour of driving, then motorists will pay a toll to save the time. But if alternatives, such as nearby surface streets, attract those who do not want to pay, tolls compound traffic problems by diverting traffic.

Tolls have gone in a new direction recently. Rather than paying tolls to use a brand new corridor, motorists now have the opportunity to pay a toll to avoid congestion in an existing corridor. And technology allows the road operators to vary the price depending on the level of congestion on the free line, ensuring that the toll road remains free flowing. Two approaches to congestion pricing have been underway for several years and appear successful.

Parallel Toll Roads

Where there is unused right-of-way in freeway corridors, extra lanes, financed by tolls, can provide alternatives to the adjacent free, but congested, lanes. Well-known examples of this are the SR 91 Express Lanes in Southern California. This 10-mile section of freeway lies in the median of the Riverside Freeway, which connects Orange and Riverside Counties. An automated toll collection system collects between $1 and $5, depending on congestion levels on the mainline. The new road was privately financed, but is now owned by Orange County. (Transportation Economic Partnerships Office, 2004)

HOT Lanes

Unused capacity in existing high occupancy vehicle lanes provides another opportunity to let drivers pay for quicker trips. Selling space to single occupant cars transforms the standard HOV lanes into high occupancy toll lanes, or HOT lanes. The advantage of this is that it collects new revenue from an existing investment that is otherwise being underutilized. In San Diego the Fastrak program on the I-15 Express Lanes allows SOVs to use the express lanes for a toll of between 75 cents and $4.00. (FastTrak Online)

In Washington, few corridors have enough excess right of way to consider building additional toll lanes. The Washington State Department of Transportation (WSDOT) is, however, seeking approval to institute a HOT lane on SR-167 in South King County as a pilot project. WSDOT studies indicate that some sections of freeway in East King County have excess capacity during mid-day that could be sold via HOT lane technology. (Washington State Department of Transportation (2))
One problem for toll roads is determining the appropriate toll rate, especially when they can vary, as in the California systems. The Puget Sound Regional Council recently launched a study to discover what sort of cash value commuters place on their access to roadways and, therefore, what they might pay in tolls. Five hundred volunteers have allowed their vehicles to be equipped with devices that use GPS technology to track their trips and charge them fees depending on where and when they travel. Volunteers are given “endowment accounts” from which these fees will be deducted. As an incentive to drive on less-congested roads, they can keep whatever is left in their accounts at the end of the study. Results are due in 2006. (Puget Sound Regional Council)

EFFICIENT USE OF TRANSPORTATION FUNDS

The infrastructure and public works fields have never been known as hotbeds of innovation and efficiency. Consumer products continually get smaller, lighter and less expensive, while delivering ever greater performance. And yet at the same time, infrastructure seems to get larger, more intrusive and more expensive, while performance deteriorates. Because we assume we will pay more and get less, agencies have little incentive to work toward efficiencies.

Of the various types of public infrastructure, roads and highways have generated the biggest concern about efficient use of funds. The Governor’s Blue Ribbon Panel on Transportation confronted this problem head-on, urging WSDOT to operate with greater efficiency and accountability. WSDOT responded with a series of initiatives, beginning with adoption of performance benchmarks for various aspects of the transportation system (including pavement condition, congestion, and bridge structural integrity) and a regular reporting on how those benchmarks are moving. WSDOT’s work program, “2003-2007 Business Directions” contains specific targets for operations and management, based on a range of efficiency measures, such as the time it takes to get projects bid and underway. (Washington State Department of Transportation (3)) The benchmarks for system performance and department management are all tracked through a quarterly publication “Measures, Markers and Mileposts,” also known as the “Gray Notebook.” (Washington State Department of Transportation (1))

The adoption of these efficiency measures is certainly encouraging, but it’s important to remember that it does little good to be efficient at doing the wrong things. The larger question is whether WSDOT is setting the right priorities and undertaking the right projects.

On the operations and maintenance side, the performance measures should indicate priorities for spending, based on accepted engineering standards. On the capital side, however, the Legislature has dictated the department’s work for the next decade by listing specific projects across the state. When a list is developed in a legislative setting, it inevitably reflects political considerations and the need to secure funding support.

The efforts of WSDOT mirror, to some extent, the larger “Priorities of Government” process undertaken by state government in the 2003-2005 and 2005-2007 budget cycle. Instead of the usual incremental
increases in agency budgets, each department was told to submit its budget request based on achievement of 10 priorities for state services (an 11th priority was added in the 2005-2007 cycle). To the extent that WSDOT ties its budget to its own specific performance measures, it will provide some assurance that scarce transportation dollars are going to the most pressing needs.

Still, an ongoing tension exists within transportation agencies, at both the state and local levels, between maintenance and upgrade to the existing system on the one hand and addition of new capacity on the other. Most agencies assume that with respect to general transportation dollars, maintenance comes first and new capacity comes second. Given the poor state of roads in nearly all areas, maintenance can soak up all available dollars and still not bring the whole system up to current standards. These agencies must, therefore, rely on separate, earmarked funds for major capital projects. WSDOT funded a set of “super category C” projects in the 1990s, and now has the “nickel” fund that is dedicated entirely to capital projects.

PRIVATE SECTOR ROLES – DESIGN-BUILD-OPERATE-MAINTAIN

In the early days of our country the private sector played a central role in infrastructure development, building canals, railroads, streetcars, water systems and ports. As governments strengthened they gradually took over the construction of public works, and for the past 100 years the private sector has served mostly in contracting roles, with government agencies providing overall project management and operation. In some areas that has begun to change. Allowing more central roles for private sector companies can provide flexibility in financing and more efficiencies in execution. While Washington has dabbled in privatization of infrastructure, it has not been a leader.

Infrastructure projects have a number of components, many of which are regularly contracted out to the private sector: planning, design, engineering, construction, finance, operation, maintenance. Innovation comes in when those components are combined to give a private contractor larger overall control of the project and greater accountability for outcomes.

The design-build-operate-maintain (DBOM) approach has achieved some significant successes. In a traditional design-bid-build approach to infrastructure, an agency hires one firm to design the project and another to build it, and then the agency maintains and operates the facility itself. In a DBOM approach, a single firm or team designs and builds the project, and then sticks around to operate and maintain it. Not only is this more efficient – the institutional knowledge follows the project all the way through – but it also provides very strong incentives for quality, since the firm will be responsible for building what it has designed and operating what it has built.

The most notable examples of DBOM contracts in the state have been the Seattle Water Department’s Tolt Filtration Plant, which opened in 2000, and the Seattle Monorail, which may get underway in 2005. In both cases, vendor teams were presented with performance objectives and given some latitude in proposing ways to meet those objectives. In
the DBOM approach the agency does not look for the lowest bid on individual pieces, but the most effective way to meet performance goals over time.

WSDOT had an elaborate DBOM program, the Public-Private Initiatives Act, adopted in 1993, which issued an open-ended call for proposals to privately build and finance transportation projects in the state. Although the program generated little notice at its inception, once teams announced projects, significant opposition arose, and the Legislature eventually scuttled it. The Tacoma Narrows Bridge project began under this program, but has evolved along more conventional lines. (Transportation Economic Partnership Office, 2004).

**CONCLUSION: DO WE HAVE THE TOOLS?**

Over the past generation, state and local governments have faced significant challenges funding infrastructure. Systems built during times of rapid growth and federal largesse now need major upgrades or replacement during a time when tax bases are not growing as fast and the federal government has backed off on funding state and local infrastructure. General taxes increasingly go toward major priorities like education, public safety and human services, leaving infrastructure out of luck.

In the face of these challenges, governments across the country have developed a range of innovative funding mechanisms and have dusted off some old ones. Washington State and its local governments have most of the known tools at their disposal, and many of these tools are in use. While work is needed on tax increment financing and public private partnerships, it is safe to say that agencies have access to most of the known non-traditional funding and financing tools.

The challenge, then, is to get more agencies to use them more often to pick up where traditional methods prove inadequate. Given the experience of the public-private partnerships in the 1990s, it is no wonder that governments want to stick to well-tested financing methods. But with several new approaches coming on line – WSDOT accountability, tolls on the Tacoma Narrows Bridge, a DBOM for the Seattle Monorail – the public will have a chance to see how to get more for its infrastructure dollar and how to better tie costs to benefits.
REFERENCES

FasTrak Online. http://argo.sandg.org/fastrak/


Washington State Department of Transportation (1). Measures, Markers and Mileposts (the Gray Notebook). Published quarterly

Washington State Department of Transportation (2). High Occupancy Toll Lane Overview.

Twin hallmarks of the American system of governance are the separation of powers (into executive, legislative and judicial branches) and the division of powers (among federal, state and local governments). While this structure provides the ample checks and balances designed to keep government open and honest, it also makes it extremely difficult to reach decisions and then to carry those decisions out. Major infrastructure projects can involve all three levels of government, with decisions taking place in legislative, executive and judicial settings. No wonder it can take decades to get projects underway: the third runway at SeaTac Airport got its last permits nearly two decades after the project was first proposed!

In an ideal world, decision-making about infrastructure projects would be streamlined to involve fewer agencies, fewer processes and fewer opportunities for opponents to throw sand in the gears, and the locus of decision-making for each project would be tied to the area benefiting from it. This brief outlines the array of participants in infrastructure decisions, describes some of the challenges inherent in decision-making about projects, and suggests actions that could help bring order to the chaos.

**DECISIONS AND PARTICIPANTS**

Moving an infrastructure project from concept through construction involves three distinct types of decision: planning, funding and regulating. As shown in Table 1, these decisions reside in a variety of units of government, making the universe of decision-makers quite large.

**Planning**

Under the Growth Management Act (GMA), the larger and faster growing jurisdictions in the state must create detailed, long-term comprehensive plans that include specific plans for infrastructure needed to support anticipated growth. Individual transportation and utility agencies have capital improvement plans which, if the jurisdiction plans under the GMA, should be tied to the comprehensive plan. Overlaying this local planning are regional plans from Regional Transportation
Planning Organizations (RTPOs), water purveyors and wastewater treaters, as well as state plans for highways.

Although state law mandates that the plans at the various levels be consistent with one another, it is easy to see how conflicts and inconsistencies can arise. For example, the state may want to expand the speed and capacity of a highway through a city, while the city’s officials would rather slow the traffic down and improve local access. As another example, a local water utility may want to hook-up additional customers, while the purveyor from which it buys water at wholesale has designated its excess capacity for another use.

The GMA requires that local governments accommodate “essential public facilities” in spite of negative local impacts. In principle, local governments should not be able to draw their own plans in a way to prevent construction of sewage treatment facilities, freeway expansions, airport expansions and other projects planned and built by state or regional agencies.
Funding

As previous briefs in this series show, infrastructure projects frequently use a number of funding sources, each of which has its own decision process. So while a single jurisdiction may plan an improvement, it often must apply to a number of separate agencies for pieces of the funding. Decisions on funding may be made at the executive level, with agencies evaluating and deciding on applications; at the legislative level, with elected officials earmarking funding for specific projects; and even at the electoral level as voters approve bond issues, levies, referenda or LID proposals. Private developers play a role as they decide to go ahead with projects that require them to contribute to infrastructure.

Regulating

Infrastructure decisions made through planning and legislation can be driven or preempted by regulatory bodies. Water and sewer utilities must respond to federal and state regulations about water quality and pollution, and this frequently requires investments the utilities would not otherwise have made. Transportation decisions can be driven by enforcement of the Federal Clean Air Act. Compliance with various environmental regulations can change the scope and design of a project.

Regulatory decisions are initially made by agencies themselves, but those decisions are often challenged through the courts. Courts and judges, at the state and federal levels, are frequently key players in infrastructure decision-making.

LEADERSHIP CHALLENGES FOR INFRASTRUCTURE DECISION-MAKERS

Decision-making about infrastructure investment will never be an entirely rational and straightforward process. Following are some of the challenges faced by participants in planning and decision-making processes.

Big Ticket Items in the Post-Interstate Era

The Interstate highway system was created to provide a national network of freeways, ostensibly over concern about the ability to move military vehicles around the country. Because the system was a high national priority, the federal government provided 90 percent of the funding. By the early 1990s, the final pieces of the system were in place, and the federal government backed off from its aggressive commitment to fund new highways and redesigned its transportation assistance programs.

The effect of the change in federal funding priorities has been to place responsibility for funding highways back on the states. But there is no political or leadership model for funding highway projects that cost in the billions of dollars. Linking costs and benefits across geographical areas is extremely difficult, if not impossible, and tolls only work in certain corridors. Building large freeway projects will inevitably require raising money across the state, and this will not be easy when
communities are accustomed to seeing their state “tax dollars at work” close to home.

Replacement and Retrofit Versus New Capacity

Some of the most expensive infrastructure projects currently under consideration in the state do not promise any substantial new benefits to mobility. For example, while fast growing areas around the state are crying out for expansion of formerly rural arterials and highways, at least $5 to $7 billion will likely be spent replacing the Alaskan Way Viaduct in Seattle and the SR-520 bridge across Lake Washington, adding little new capacity.

When most people think of our state’s transportation problems they think of traffic congestion, and yet much of the new money needed will go toward replacement and retrofit, which will do little to alleviate that congestion. Obviously, aging and unsafe structures need to be replaced, but it is much easier to ask for money when the taxpayer will see some congestion relief.

Getting Growth to Pay for Itself.

The GMA clearly states that all jurisdictions must keep up with the infrastructure needs of growth, and the concurrency provisions of the Act give local governments the power to halt growth if infrastructure becomes overloaded. But with most areas feeling that they are still playing catch up on old infrastructure needs, getting support today to fund the anticipated needs of tomorrow will not be easy. Elected officials frequently find it more advantageous to solve an existing problem than to prevent a future one.

In theory, growth should pay for itself, but governments lack the tools to capture the revenues generated by growth and direct them to infrastructure. One study found that a new, $250,000 home would generate nearly $22,000 in taxes and fees during construction, but that the majority of that money went into government general funds (Washington Research Council, 2001). The third brief in this series discusses the challenges of using tax increment financing to help growth pay for itself.

Lack of a Truly Regional Voice

An ideal system of infrastructure planning, funding and operation would be built around logical regional service territories. As the Discovery Institute argues, “Services need to be delivered in logical service areas such as watersheds, air sheds, transportation and utility corridors, and along urban growth boundaries, rather than according to increasingly irrelevant political boundaries.” (Discovery Institute, 2003)

Unfortunately, just because an area is geographically cohesive or economically interdependent does not mean it is politically unified. Despite many efforts to promote regionalism, our system of government continues to be highly fragmented and localized. Local governments still provide the vast majority of infrastructure and retain important influence over state infrastructure such as highways.

Unlike states, which cover a distinct land area of the country and whose duties are spelled out in the U.S. Constitution, local governments are voluntary and each comprises a group of people more than a land area.
(This distinction is made clear in the tortuous boundaries created during incorporation processes. Proponents draw a line to capture a majority that will support incorporation, regardless of how strange the new city will look on a map). Absent some major unifying force, any new regional government will be an artificial construct and lack the common goals and visions that define cities. Efficiency of service delivery has not proved a compelling reason to create a new, powerful layer of government.

No area in the state has a truly regional government that can pursue regional infrastructure. Regional decisions continue to be made by federated bodies controlled by representatives of local governments. These federated bodies, while often adequate to their designated tasks, present their members with two notable problems. First, as a practical matter, most elected officials serve on a voluntary basis and have little time to devote to regional bodies. Second, regional bodies can ask elected officials to put regional concerns ahead of the concerns of the very people who elected them. Federated bodies also lack a basic accountability loop: voters rarely examine the work elected officials perform as members of regional bodies.

**Fragmentation of Agencies**

A public works director from another planet would be appalled at the fragmentation of infrastructure agencies in Washington State. The 2002 Census of Governments found, in addition to the state’s 279 cities, 1,469 special districts, most of which provide important public infrastructure. (U.S. Census Bureau, 2002) And this enumeration does not include thousands of private water utilities. Table 2 shows the breakdown.

In rural areas without general purpose governments, special districts serve a useful function in allowing residents to organize and pay for specific services. But in urbanized areas special districts simply add another layer to an already complex governance structure. In many newer cities special districts continue to operate after incorporation, and it has proved politically difficult to merge them into city government. (Discovery Institute, 2003) At the same time, expensive new regulations in areas such as water quality and homeland security, strain the financial capacity of special districts and even cities.

The existence of special districts in urbanized areas can lead to planning problems. Cities trying to promote infill housing growth have found that hook-up charges levied by water and sewer districts can be prohibitively expensive.

<table>
<thead>
<tr>
<th>Special District Type</th>
<th>Number in Washington</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire protection</td>
<td>387</td>
</tr>
<tr>
<td>K-12 Schools</td>
<td>296</td>
</tr>
<tr>
<td>Water and/or sewer</td>
<td>195</td>
</tr>
<tr>
<td>Housing, health and social services</td>
<td>116</td>
</tr>
<tr>
<td>Cemeteries</td>
<td>100</td>
</tr>
<tr>
<td>Drainage and flood control</td>
<td>93</td>
</tr>
<tr>
<td>Parks and libraries</td>
<td>78</td>
</tr>
<tr>
<td>Other</td>
<td>204</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,469</strong></td>
</tr>
</tbody>
</table>

*Source: U.S. Census Bureau*
ment, a separate fire district has little incentive to accept narrower streets. (Economic Development Council of Seattle and King County, 2003)

**TOWARD BETTER INFRASTRUCTURE DECISION-MAKING**

The current structure of decision-making on infrastructure has evolved over the past century and, as with any long-standing system, will not change easily. Following are three measures that could facilitate better decision-making on infrastructure in the state.

**Two-Tier Regional Government**

Not all local services and functions would benefit from regionalization. A two-tier structure recognizes that some functions should take place at the regional level and some should stay at the local level. Under two-tier systems, a regional government performs a limited number of regional services, such as regional planning, major arterials, regional parks, sewage treatment and transit, while a complete network of local governments provide only local services.

With a two-tier government, major infrastructure decisions would be made by a regional government that only has responsibility for regional matters and that can, to some extent, override local objections. The regional government would have access to the entire regional tax base so it could raise enough money to fund large projects and have sufficient capacity to support large bond issues. At the same time, the functions that provide the most emotional attachment to local government, such as local planning and zoning, remain with historic cities.

To make a two-tier system work: (a) there must be a clear delineation between regional and local services to minimize conflicts; (b) the regional government must concentrate on functions with overwhelming technical and financial aspects that are clearly beyond the scope of most cities; (c) the regional government must not attempt to take over services with a high degree of local attachment, even if they might be offered more economically; (d) there must be no unincorporated areas that require urban-level services from the regional government.

Regional government is a difficult enough sell on the basis of efficiency and technical competence, but becomes even harder when proposed on the basis of social equity. In other words, to have any hope of adoption, a regional government proposal must offer improved services to everyone in the area, and not suggest redistribution. (Gerald E. Frug, 2002)

**Tie Discretionary Funding to Growth**

The GMA requires local governments to “accommodate” projected growth, but does not provide many tools or incentives. A common, but probably erroneous, belief persists that residential growth does not pay its way, making local governments leery of investing in infrastructure that would accommodate housing. The various state agencies that provide infrastructure grants and loans could retool their program criteria to emphasize funding infrastructure that facilitates residential growth. Since most state programs operate on a matching basis, this would encourage local governments to steer funding toward the needs of growing parts of their jurisdiction.
Merge Special Districts into Cities

There is no logical reason for utility and fire districts to exist within city boundaries. Merging special districts into municipal governments will allow cities to plan infrastructure investments and financing strategies that support their growth plans. (Economic Development Council of Seattle and King County, 2003) Since special districts are often not coterminous with cities, the merger process must ensure that any part of a merged district outside of the city is not harmed in the process.

Although utilities and fire departments can operate economically at less than a regional level, they do need some economies of scale. It would not make much sense for a very small city to take on utility and fire service. So, where a district serves several smaller cities, it could be merged into the largest city, and the new municipal department could contract for service with the smaller cities.

CONCLUSION: THE WORLD HAS CHANGED, BUT GOVERNANCE HAS NOT

Major public policy changes in the past decade have made the present array of infrastructure decision-making structures highly problematic. Existing agencies can create plans that are technically accurate and useful, but when it comes to setting priorities, making choices and asking taxpayers for money – the basic tasks of leadership – current governance structures provide a poor framework for decision-making. Political exigencies will generally trump good planning.

Citizens of the state will, however, be understandably suspicious of attempts to change those structures. New structures and processes must be perceived as a better way to iron out compromises and deliver what voters want, and not as a way to ram unpopular projects and taxes through. As the proponents of the transportation public-private partnerships learned, Washington’s populist tradition will come back to bite any operation that looks too slick. Political repackaging rarely makes an unpopular proposal into a winner.

New governance structures that improve focus, accountability and coordination, combined with some of the tools described in the third brief in this series, have the potential to create a closer tie between infrastructure investments and the benefits they provide. Making that connection will increase the chance that voters will fill in the bubble next to “Yes.”
REFERENCES

Discovery Institute. 2003. How Do We Get There from Here? A Transportation Future for the Puget Sound Region.

Economic Development Council of Seattle and King County. 2003. Assessment of the Development Environment in King County.


Infrastructure in Washington: Connecting to Growth

All signs point toward a period of sustained population growth in Washington in the second half of the decade, which the state’s infrastructure is not prepared to handle. Every new household in the urbanized areas needs water and sewer hook-ups and transportation networks need the capacity to move these new people to their jobs and around their neighborhoods. Likewise, growing businesses need utility hook-ups and the ability to move freight and service vehicles. State, and especially local governments, however, have limited ability to extend the infrastructure networks that allow urbanized areas to function and grow. Failure to provide the capacity to connect growth into infrastructure will not bring that growth to a halt, but will, instead, create chaos not only for newcomers, but for those who live here already.

The passage in 2005 of the new 9½ cent fuel tax, and the failure of the attempt to repeal it, are certainly good signs that the leaders and voters of the state take seriously the need to address deficiencies in infrastructure. Helpful as it is, however, the new fuel tax, and its 2003 predecessor, the “Nickel” program, fall short of what state and local agencies require to meet the next wave of growth. Efforts must now turn toward three key strategic needs:

**Highway capacity for growth.** The Legislature and the Department of Transportation (WSDOT) have allocated a substantial portion of the new fuel tax revenue to projects that replace and refurbish existing highway capacity and relieve existing congestion, but do not add substantial new capacity in areas slated for growth. There is no question that the Alaskan Way Viaduct and the SR-520 bridge need replacing, and that chokepoints in the freeway system need attention, but these very expensive projects do not extend the system or provide enough expansion in heavily traveled corridors. We need a strategy that specifically adds new capacity for growing areas.

**Local road needs.** While the Legislature has given state highway programs a total of 14 cents-per-gallon of new fuel tax revenue, local governments have received only ½ cent, shared between cities and counties. The compact urban forms that the Growth Management Act (GMA) calls for require major expansions of local streets and arterials, and extension of arterials to newly-developing areas.
But in the face of this need, local governments have lost local option funding and seen inflation diminish the purchasing power of their share of the fuel tax. The aggressive funding, efficiency and accountability programs now in place at the state level need to move to the local level.

**Water, sewer and stormwater systems.** While transportation deficiencies get most of the attention, inadequacy of water, sewer and stormwater systems has greater potential to misdirect or distort growth. Irritating as traffic may become, it does not pose public health or environmental problems the way overloaded water, sewer and stormwater systems can. Currently, these systems are funded, built and operated at the local level, with state help only at the margins, and yet rising costs and increasing regulatory burdens place many local systems in jeopardy. We need a fresh look at how we can provide water and sewer hook-ups to growing areas of the state.

This policy brief looks at the challenges facing state and local agencies as they try to keep up with the infrastructure needs of a growing state. It begins with a look at growth trends and how they are likely to affect infrastructure networks. It continues with some specific policy dilemmas faced by state and local agencies, followed by a discussion of priority-setting processes that determine how money gets spent. The brief concludes with a review of funding sources now in use and the degree to which they can be used to fund system expansions and extensions needed for growth.

This brief makes a distinction between two types of infrastructure capacity expansion. The first, and currently most common, type of capacity expansion happens in already developed areas. Some of this capacity is aimed at encouraging and facilitating infill development, but much of it tries to remedy system overloads caused by insufficient investment in the past. The second, and more rare type of capacity expansion, extends systems into newly-developing areas to provide the infrastructure needed for new homes and businesses. As will be shown, this latter type of capacity expansion tends to fall to the bottom of the priority list, which both inhibits needed housing growth and points toward capacity overload in the future.

**GROWTH IS COMING – AND IT FLUSHES A LOT**

Like most coastal areas of the country, Washington State typically grows faster than the national average. While Washington’s natural population increase – births minus deaths – tracks the rest of the country, migration has caused the state’s population to surge. With the exception of a couple of years in the early 1980s, Washington has seen a net in-migration of people every year since the Boeing Bust of 1970. Two key features of this migration pattern play a role in demand for housing, and, therefore, for infrastructure to serve that housing.

First, in-migrants tend to be younger, well-educated and high-earning. (Franklin, 2003) A migrant is much more likely to be a young software engineer recruited by Microsoft or a botanist recruited by Weyerhaeuser than to be a middle-aged laborer with a high school diploma. While major contributors to economic vitality, these migrants will place strains on the state’s housing stock and infrastructure, since they will look for family-
Second, migrants come from California more often than anywhere else. In fact, one-in-eight Washingtonians was born in the Golden State. The northern migration of Californians does not come from an aversion to sunshine and surf, but rather because the economies of Washington and California have many parallels. The California workforce has abundant skills that Washington employers demand.

Thus, migration from California follows the relative fortunes of the two states’ economies, especially aerospace and high tech. Recent trends and projections from the states of California and Washington indicate that we could be in for a new wave of in-migration. First, while overall employment in California is expected to grow at about the national average of 1.5 percent in the next two years, Washington’s employment is expected to grow at around 2.5 percent. But more significantly, Boeing is gearing up production in Washington, while the California aerospace industry has yet to recover from sharp job losses in the past five years. Similarly, the California software and internet industries show flat growth over the next few years, while these industries will grow in Washington. (Washington State Economic and Revenue Forecast Counsel, 2005; California Department of Finance, 2005).

If the Washington economy does keep up a pace of employment growth in the 2.5 percent range, and the rest of the country is bumping along at 1.5 percent, we can expect to see not only Californians coming to Washington, but also well-qualified people from elsewhere. After all, the people who lost their jobs in the last recession are not necessarily candidates for the new jobs being created today. And if the trends noticed by the Census bureau hold true, the in-migrants will sooner or later gravitate toward detached housing in areas with good schools for their children. Those software engineers who move into the urban lofts have a habit of becoming soccer moms and dads before too long, placing a full complement of strains on infrastructure with their high number of daily trips and multiple bathrooms.

So, while our growth strategies emphasize infill and higher densities, with their lower demands on infrastructure, actual population growth trends point toward continued demand for conventional single family development which requires high capacity infrastructure retrofit and extensions.

**POLICY CHALLENGES**

Deficiencies in state and local infrastructure cannot be blamed on a lack of planning. The state DOT has a detailed investment plan, metropolitan transportation planning organizations all have regional plans, and local jurisdictions have infrastructure elements in their comprehensive plans. Plans, however, do not generate revenue, and the actual process of deciding what projects to build and how to pay for them is fraught with policy and political challenges. Those challenges include:

**Assessing local needs.** Local governments face a dilemma when describing their infrastructure needs. The vehicle to outline those needs is the capital facilities element of the local comprehensive plan which, in turn,
drives the jurisdiction’s capital improvement plan. These documents, however, do not allow jurisdictions to keep up with infrastructure needs of growth for two reasons.

First, the process looks out only six years, whereas the rest of the land use planning process looks out 20 years. In the world of land development, six years is not a very long time, so developers can never know for certain if and when areas slated for development within the 20 year planning horizon will have road and utility extensions. The Buildable Lands Process promises developable land, but infrastructure plans cannot indicate if much of that land will be served. (Washington Research Council, 2005)

Second, the whole process must be “resource constrained,” listing only those projects that have identified funding. This helps prevent irresponsible planning, but also ensures that many “needs” will never see the light of day, since they exceed known funding within the six-year CIP timeframe.

To gain additional resources from the Legislature it would be helpful to know the magnitude of the challenge facing local governments. The systems for gathering and aggregating information about local infrastructure needs are, however, not adequate to the task. Previous studies have provided only an incomplete snapshot of needs, and a comprehensive information system, known as LINAS, remains incomplete and unreliable. A recent study placed the statewide local infrastructure funding gap at between $2.3 billion and $5.5 billion, which is too wide a range for effective resource planning. (Freund, 2006).

**Freeway capacity: the elephant in the room.** When the current freeway network was laid out in the 1950s, Washington had a population of about 2.5 million, or less than half of today’s population. Moreover, fewer households owned cars (let alone three or four) and fewer women commuted to work. In the past 50 years, population, car ownership and individual vehicle-miles traveled have all exploded in the state, with very few new lane miles added to the freeway system. The results show: chronic traffic congestion throughout the urbanized areas of the state, which spills over onto local arterials.

Yet transportation plans show only fragmented sections of general purpose lane being added to this dysfunctional system. These plans will relieve congestion at choke points but will not allow major growth in use of the system. Conventional wisdom suggests the futility of trying to expand the freeway system, since the enormous costs would not yield major improvements in congestion. But with large segments of the freeway system operating at capacity for much of the day, it has no further capacity to absorb the growth that is coming to the state.

A second part of conventional wisdom about the freeway system is that transit will absorb much of the new travel demand. But current plans do not indicate that transit ridership will grow much beyond its current market share. The Puget Sound Regional Council estimates that if all the projects in its Destination 2030 plan are completed, transit’s share of all trips in the region will grow from 2.8 percent to 5.1 percent, and transit’s share of commute trips will grow from 7.3 percent to 11.8 percent. Most of this modest ridership growth, however, will consist of trips to and from Downtown Seattle, with the rest of the region seeing minimal growth in transit.
The high cost and disruptive nature of major freeway expansion make it a difficult topic. Who really wants to contemplate an expansion of Interstate 5 across the Lake Washington Ship Canal? But it is hard to imagine the state and its urbanized areas growing by millions of people in the next decades without new capacity in the spine of the roadway system.

**Retrofitting for infill.** With the supply of undeveloped land in the peripheral parts of urban growth areas becoming scarce, housing development has moved towards infill areas, just as growth management anticipated. While growth management theory suggests that infill development saves money on infrastructure, it turns out that much of the infrastructure in these infill areas cannot accommodate growth, and retrofitting it is costly and difficult. Consider three problems with infill and infrastructure.

First, the capacity of the infrastructure serving a particular parcel, especially underground utilities, reflects the land use originally designated for the area. Pipes with capacity for single family housing may not have capacity for higher density multi-family housing, and many areas still use septic systems. Low density neighborhoods can function well without curbs, gutters and sidewalks, whereas those structures are necessary for higher densities.

Second, many areas slated for infill have badly deteriorated infrastructure that requires replacement, regardless of whether it has capacity. Many systems were built inexpensively in the first place and have reached the end of their useful life. Other systems, especially stormwater systems, fail to meet current performance standards. School districts across the state are replacing entire schools as little as 40 years old since they cannot support today’s technologies and educational programs.

Third, trunk systems like arterials cannot accommodate additional growth, and are difficult or impossible to expand without huge cost and disruption. Many areas designated for high density infill already have substantial residential populations and retail and commercial uses which are absorbing transportation and utility capacity.

Funding the retrofit of infrastructure for infill presents some major political and social problems. In most areas designated for infill the existing infrastructure works fine for the current uses, and the residents and businesses in the area have little to gain by paying for upgrades. Some owners may recognize the increase in property values that would result from infrastructure upgrades, but others will have little interest in paying today for financial benefits they will not see until they sell their property. At the same time, the developer who puts the back-breaking straw on the camel and tips a system into overload should not have to pay to upgrade the entire system.

Many jurisdictions have recognized the need to upgrade infrastructure in infill areas, but most of these upgrades are associated with designated urban centers. Many other areas with good potential for infill do not have the high profile of urban centers or potential profitability high enough to induce developers to undertake infrastructure investments themselves. Such areas can languish for years and fail to meet their potential to accommodate growth.
Waiting for greenfield extensions. As will be discussed further below, so much effort and money goes toward rebuilding crumbling infrastructure and catching up with capacity deficiencies of the past, that not much is left to build road and utility extensions to undeveloped areas within urban growth boundaries. But as noted above, the kind of population growth we will experience suggests continued strong demand for traditional detached housing, and the easiest and most cost effective places to build those new neighborhoods are beyond the last sidewalk and sewer line.

This is where the problem of planning horizons comes in. The short time-frame for capital facilities planning, and the uncertainty of funding for capacity extensions, hampers the ability of developers to plan new subdivisions. The length of time from when a developer takes an option on a piece of property until the first toilet flushes in the development can be many years. For developers to be willing to risk money on property they need assurances that the city, county or utility district will have infrastructure finished on time. With new capacity extensions having low priority in most capital budgets, and concurrency requirements demanding new capacity to serve new development, growth on the periphery will slow, and prices of single family housing will continue to rise.

PRIORITIES FOR INFRASTRUCTURE FUNDING

Building, operating and maintaining an infrastructure system is a hugely complex undertaking, with needs always exceeding available funding. As much as administrators would like to think they have objective methods of setting priorities for the financial demands on their systems, decisions about where to put the next dollar have a political component (Sanders, 1984). The demands of present users will often outweigh the need to provide infrastructure for growth.

Following are the basic types of infrastructure work along with a sense of their relative priority within jurisdiction and agency budgets. These categories often overlap, with two or more types of work being accomplished in the same project.

Maintenance and operations. Agencies try to keep their systems operating within a set of performance standards. Road agencies have goals for pavement quality, timely pothole filling, signal reliability etc. Utilities need to fix leaks, keep pumping facilities operating and ensure water quality. These basic activities generally receive first call on funds. With utilities, maintenance funding comes through rates, and many cities can meet their basic maintenance and operations goals with dedicated funds such as fuel tax distributions.

Rebuild and replacement. Eventually facilities wear out and must be replaced to ensure reliability. Utilities can fund these projects either with pay-as-you go money from rates or with revenue bonds backed by rates. Transportation projects can be bonded at the state or local level, or funded through programs such as the Transportation Improvement Board. Ideally, deteriorating facilities should be rebuilt or replaced before catastrophic failure, but this does not always happen. In any case, rebuild and replacement tend to fall in a high priority category as well, since the integrity of the system depends on it.
Upgrades to new standards. Performance standards for infrastructure operate with a ratchet-effect. They tend to become gradually more stringent, and rarely less. New federal water quality standards and efforts to save endangered species have necessitated upgrades at water, sewer and stormwater utilities. Across the state, blighted urban roads are being transformed into attractive streetscapes with new sidewalks, plantings and trees. Neighborhood streets bounded by open ditches may receive the full curb-gutter-sidewalk treatment. The level of priority given to these projects varies, depending on the need to comply with legal requirements or whether a compelling case can be made for safety improvements.

Catch up with capacity deficiencies. Much of the new infrastructure capacity being added in the state today is intended to serve existing development. Demand has outstripped the capacity of the freeway and arterial systems in many areas, and those roads are now being expanded. “Congestion relief,” which has become a major emphasis of the state DOT, typically means adding capacity that should have been built 10, 20 or 30 years ago. The high priority given to remedying deficiencies can be seen in the project lists accompanying both the 2003 Nickel and the 2005 Transportation Partnership programs.

System extensions for growth. The types of projects that typically fall to the lowest priority level are those that provide new capacity ahead of growth. This can mean extending arterials or utilities into undeveloped areas, or adding the capacity that low density areas need to become higher density. An example of such a project is the proposed Cross-Base Highway in Pierce County. This new corridor would connect the Parkland/Fredrickson area, which has huge housing and commercial development potential, to Interstate 5, vastly increasing its attractiveness as a development area. Although the project has received enthusiastic support for 20 years, it has only received design funding so far.

This general sense of priorities, whether exercised through formal standards or through politically-generated project lists, has both political and administrative logic. Emphasizing the integrity of the existing system, through maintenance, preservation, and replacement, as well as safety, makes perfect sense. So does addressing chokepoints and bottlenecks that plague the system, as so many of the projects in both the Nickel and new Transportation Partnership programs do. The problem is, however, that these types of expenditures can easily eat up all the available money, leaving little to add capacity for the future.

The concurrency provision of the GMA dictates that infrastructure be in place at the time new residential and commercial developments get built. If infrastructure capacity for growth must compete for funding with maintenance, replacement, congestion relief and safety, it will tend to come out on the short end. After all, what is the political constituency for growth, as compared to the constituencies that use the current system? As will be discussed below and in the next paper in this series, capacity for growth needs its own funding mechanisms at the state and local level, based on the revenues generated by growth.

CURRENT INFRASTRUCTURE FUNDING SOURCES

The discussion above on priority setting suggests that the current system of funding infrastructure is biased against new capacity aimed at growth. Following is an outline of current major state and local sources of infrastructure funding and an assessment of the degree to which they are now, or could be, used.
to fund new system extensions to serve growing areas. This section covers original sources of funds, and notes where those funds can be leveraged with various kinds of debt.

**Motor fuel tax.** The state DOT receives the largest share of the motor fuel tax, with money going into several pots. The largest share – revenue from 11 cents per gallon – goes into the general DOT budget which funds primarily maintenance and replacement. The next share – the Nickel – funds projects on a legislatively-mandated list, many of which add new capacity. State DOT has bonded heavily against the Nickel revenue to accelerate construction of projects on the list. The new Transportation Partnership program, funded with 8.5 cents of the newest fuel tax, also works off project lists that include new capacity. As noted above, however, most of the projects in the Nickel and Partnership programs represent catch-up and congestion relief, rather than extensions to newly-developing areas.

The Transportation Improvement Board receives revenue from 3.0 cents per gallon of fuel tax, and uses this money to pay for city and county road improvements throughout the state. Among the various TIB categories, the Urban Arterial Program has the most promise for funding new capacity for growth. A look through the recent project list shows a number of projects that will have the effect of opening new areas to development. Many projects do, however, fall more into the category of upgrades or congestion relief.

Cities and counties receive a direct distribution from motor fuel tax as well. Currently, cities receive revenue from 2.5 cents per gallon, and counties receive revenue from 4.4 cents per gallon, with the revenue divided among jurisdictions by formulas. The last fuel tax increase included an additional 0.5 cents per gallon for both cities and counties. There may have been a time when these funds could help build new capacity, but since the fuel tax does not grow with inflation, and the recent increase is the first in 15 years, cities and counties have seen their fuel tax revenue shrink in purchasing power to the point where it falls short of meeting even maintenance and rebuilding needs. Most cities use some general fund revenues to supplement fuel tax revenues for their transportation operating budgets, and counties have a special transportation property tax levy to draw on.

**Licenses and fees.** The state DOT collects funds from a variety of licenses and fees. Some of this revenue goes toward the DOT road budget, but because these revenues are not bound by the 18th Amendment (which requires that fuel taxes be spent on roads only) they can be used for non-highway expenses such as the State Patrol. The funds that do go toward roads will be lumped in with the 11-cent portion of the fuel tax which largely funds maintenance and operations.

**Property taxes.** At the state level, property taxes go exclusively to fund education. At the local level, property taxes do fund transportation to some degree. Counties have a road levy that is intended to be used exclusively for transportation budgets. Since most of the undeveloped land that needs infrastructure extensions is found in unincorporated areas, these funds should be used for road extensions into those areas. In cities, property taxes go into the general fund, and most cities use some general fund revenues to supplement fuel tax distributions for their transportation budgets.

The large arterial extension projects needed to open new areas for growth can-
not, however, be funded on a pay-as-you-go basis. Cities and counties will typically finance these projects with bonds which are repaid through property taxes. Smaller projects may be financed with “councilmanic” bonds which do not require a vote or a tax increase, but are retired through general fund budgets. Larger projects will require a voter-approved general obligation bond issue, which comes along with a property tax increase to retire the debt.

To the extent that cities and counties have unused regular property tax capacity, they can ask their voters for a “levy lid lift,” providing a property tax revenue stream dedicated to transportation. Although a lid lift does not generate the huge up-front cash that a bond sale does, it requires only a 50 percent majority vote, whereas bond issues require a 60 percent majority.

Other methods of extracting money from property owners to fund infrastructure include local improvement districts (LIDs) and road improvement districts (RIDs). These mechanisms fund specific infrastructure improvements through special assessments paid by the benefiting properties. Cities and utility districts often use LIDs to pay for new sewer extensions through low-density areas that have relied on septic systems. RIDs can fund improvements such as curb-gutter-sidewalk upgrades to residential streets. In all cases, however, the LID or RID must demonstrate that the improvement will increase the value of each property by at least as much as the amount paid by the property owner. Although they can be awkward and difficult to implement, LIDs and RIDs are perhaps the best tool for funding extensions of infrastructure capacity through low density areas.

Although the success of statewide initiatives to limit property taxes may scare some leaders away from considering bond issues, levy lid lifts or LIDs, those very initiatives have provided the capacity to use property taxes. After all, with property tax collections lidded at a one-percent annual increase, and with inflation and personal income in the state growing at a higher rate, most homeowners have experienced a real property tax cut in recent years. If properly approached, they may be willing to invest some of that tax cut in the infrastructure needed to keep their communities growing gracefully.

Sales taxes. The state sales tax in Washington goes to the state general fund, which does not contribute very much to infrastructure extensions. The bulk of cities’ and counties’ local sales taxes also go directly into general funds. As noted above, most cities use some general fund revenues for road budgets, although this will generally be limited to maintenance and operation costs. Transit agencies in the state have access to the sales tax, but use it primarily for operation costs. As discussed below, the Regional Transportation Investment District has access to the sales tax for transportation system expansion.

Utility rates. Although utilities occasionally fund capital projects through general obligation bonds and property taxes, they more typically fund expansion through revenue bonds backed with rates paid by their customers. Revenue bonds have the advantage of not requiring a vote or a tax increase, and the city or utility district issuing them can raise rates to retire the debt. Utilities can use their system-wide rate-base to fund upgrades and major system improvements (such as adding secondary sewage treatment to an existing treatment plant) but will tend not to use this method for system extensions.

King County’s approach to funding its massive new Brightwater treatment plant loads the entire cost of that plant onto new customers throughout the sys-
tem. Since Brightwater will free up capacity in the other two King County plants (Renton and West Point) all new homes and businesses hooked up to the King County system will pay through initial hook-up charges and higher monthly bills. These fees will retire the revenue bonds sold for construction.

**Development and hook-up fees.** Most infrastructure extensions or upgrades in peripheral areas rely to a large degree on fees imposed on new development. Such fees can be imposed as mitigation under the State Environmental Policy Act, as impact fees under the Growth Management Act or as hook-up charges by utilities. Although the existence and magnitude of these fees varies widely among jurisdictions, the cumulative total can be quite high and add major costs to land development.

While development and hook-up fees can help pay for marginal improvements to systems – a short sewer or water line extension or a nearby intersection expansion – they do not always provide a reliable and large enough source of funding for major system extensions. It may be risky to bond against anticipated mitigation and hook-up fees since the pace of development cannot always be anticipated, and revenues may fall short if development slows. Furthermore, the requirement that all mitigation fees demonstrate a nexus between the development and the infrastructure improvement funded by fees means that jurisdictions cannot “bank” fee income for large projects.

**RTID Package.** In 2002 the Legislature authorized King, Snohomish and Pierce counties to create a Regional Transportation Investment District (RTID) to fund major system improvements in the Puget Sound region. The RTID can, subject to voter approval, levy the following taxes and fees throughout the three-county region:

- **Sales tax.** Up to 0.5 percent
- **Vehicle license fee.** Up to $100 per vehicle
- **Parking tax.** The existing local option parking tax can be used region-wide
- **Motor Vehicle Excise Tax.** Up to 0.3 percent of vehicle value
- **Employer Excise Tax.** Up to $2.00 per employee per month
- **Tolls.**

The current RTID project list shows a combination of congestion relief projects and new capacity in growth areas, especially in Pierce and Snohomish Counties (e.g. Cross-Base Highway in Pierce County and SR-9 expansion in Snohomish County).

**CONCLUSION**

This review of priority processes and funding sources indicates that, while some system extensions may get funded, administrative and political dynamics will still bias funding toward the existing network. With traffic congestion reigning as the most often-identified public policy problem in the state, and with the GMA emphasis on infill development, remedying deficiencies in existing systems makes sense. But such improvements should not come at the
near total exclusion of system extensions. The whole reason that agencies must play catch-up on capacity in developed areas is because they failed to expand systems during times of growth. Putting more funding into system expansion now will help prevent future system overloads in growing areas.

Recent studies have indicated that residential growth throws off a huge amount of money and that capturing that money allows growth to pay for itself. The next paper in this series describes ways that the revenues from growth – in both infill and newly-developed areas – can fund the infrastructure needed for growth. With new funding strategies, state and local governments can get ahead of the growth curve and stop playing catch-up.

###

REFERENCES


State and local governments lack sufficient funds to meet our infrastructure needs. With old systems wearing out and growth straining existing infrastructure, most funding goes to maintenance and catch-up.

But agencies must play catch-up because they failed to expand systems during times of growth. Putting more funding into system expansion now will help prevent future system overloads in growing areas. To this end, Washington must consider new political models and decision processes.

BRIEFLY

State and local governments lack sufficient funds to meet our infrastructure needs. With old systems wearing out and growth straining existing infrastructure, most funding goes to maintenance and catch-up.

But agencies must play catch-up because they failed to expand systems during times of growth. Putting more funding into system expansion now will help prevent future system overloads in growing areas. To this end, Washington must consider new political models and decision processes.

Infrastructure in Washington: Letting Growth Pay for Growth

State government and many local governments have taken serious steps to address deficiencies in basic infrastructure. Significant amounts of money are being spent on highways and sewage treatment plants, as well as local roads. Most of these expenditures are aimed at remedying deficiencies rather than extending systems to accommodate growth in urban areas. This brief discusses policy changes and specific revenue mechanisms that could create additional funding for the infrastructure needed to support the growth that will head our way in the next decades.

The brief begins with a short discussion of the political environment within which governments make growth and infrastructure funding decisions, followed by a set of principles that should guide efforts to expand infrastructure capacity to meet the needs of growth. We conclude with a series of recommendations for revenue strategies to provide infrastructure funding specifically to accommodate housing and job growth.

INFRASTRUCTURE FOR GROWTH: POLITICAL ORPHAN

Prior to World War II, large cities developed in an orderly, compact way, and communities outside cities grew slowly, if at all. The old rural infrastructure systems (or lack thereof) suited most of the state. Then with the housing boom of the post-war era, growth spread rapidly into rural areas outside those old cities. The infrastructure to support this new growth rested in large part on federal funding for freeways and wastewater systems, postponing the need for state and local governments to take responsibility for funding the infrastructure of growth. Furthermore, most systems were relatively new, so state and local agencies could direct capital funding to expansion of infrastructure, rather than replacement or retrofit.

Over the last 30 years or so, as growth has strained the state’s infrastructure and old systems have begun to wear out, federal funding has diminished. Yet we have not developed a new political model to replace the money and leadership provided by federal agencies. State and local governments struggle to justify extension of roads and utilities to accommodate the expansion and greater density of our urban areas. And with so much energy and money needed to catch up on the investments not made during the past few decades, extensions for new growth often take a back seat.
Under current funding structures, the pattern is rational. From both an administrative and political perspective, concentrating on deficiencies makes a lot of sense. For public works agencies, ensuring the reliability and integrity of existing systems should always be a top priority. From the perspective of elected officials, their voters use the existing systems and expect them to perform adequately. So although expanding infrastructure networks certainly has its rewards – everyone likes ribbon cuttings – the dynamics of government lean toward existing systems.

Further, new infrastructure extensions have weak or non-existent constituencies (i.e. votes in local elections). Because they go through sparsely-populated areas that have infrastructure adequate for current low-density uses (country roads, wells and septic systems), these extensions benefit few current voters. The development and building industries and the owners of developable land will all benefit, but they may not live in the jurisdiction, and, in any case, do not carry many votes.

If infrastructure extensions need to compete for funding with existing systems every year, and for every capital improvement dollar, they will always lag behind. State and local governments need new mechanisms to capture the revenue generated by growth to pay for the infrastructure needed to serve that growth. The previous brief (PB 06-11) noted that this happens to some degree, but the existing mechanisms, especially impact fees, do not provide the magnitude of dollars or the flexibility needed to undertake major projects like arterial extensions, trunk sewer lines or drinking water storage.

**SIX PRINCIPLES**

Following are six principles that will guide policy at the state and local level toward a new model of funding that encourages the construction of infrastructure needed for growth.

1. **State must address fiscal implications of Growth Management**

The Growth Management Act (GMA) may be the largest unfunded mandate to hit local governments in a very long time. State legislation established a set of requirements with which local governments must comply, but provided no financial capacity to meet those requirements. The two most important of these mandates are:

- **Concurrency.** The GMA requires that cities and counties have adequate infrastructure in place before new homes or businesses get built. Failure to meet concurrency can mean shutting down development. Yet the state has provided very little capacity to build the needed facilities and exempted its own state highways from the requirement.

- **Infill development.** By requiring counties to cut off development from outlying areas, the state implies that future development will take place in already-developed areas. But many of these infill locations have inadequate infrastructure – septic systems, narrow roads, no stormwater systems – that cannot handle additional density. The theory that infill would not require infrastructure investments has proved wrong, yet the state has provided little assistance with upgrades.
2. Capture tax revenue generated by growth to use for growth-related infrastructure

A frequently-heard canard is that growth does not pay for itself. In fact, new housing and commercial construction generates more than enough money to pay its way (R.W. Thorpe & Associates, 2005; Washington Research Council, 2001). Most of that money, however, gets siphoned away to state and local general fund budgets. As will be described in more detail below, capturing tax revenue from growth-related activities can provide money to pay for growth-related infrastructure.

An important distinction between growth-related revenue and ongoing tax revenue streams is that the former takes place just once, and in one location. The sales tax on a construction project is paid just once, but the sales taxes paid by the residents of that project constitute a reliable stream of revenue for as long as that home stands. Because growth itself varies over time, revenue from these one-time building projects does not provide a reliable funding stream for general government purposes. Growth-related revenue does, however, provide an appropriate source of funding for infrastructure, since capital projects can vary, depending on funding.

Using growth-related revenue for infrastructure not only provides an appropriate nexus between revenue source and public need, it also removes a volatile component from the funding stream for state and local services.

3. Direct discretionary infrastructure money to areas accepting growth

State government agencies and regional planning organizations control a number of discretionary infrastructure funds available for local projects or for state projects that will have local impacts. All of these programs
have project selection criteria, and these criteria should shift to support growth. More specifically, the selection process should include a heavily-weighted criterion that measures the degree to which a local government actively supports housing growth, and the degree to which the project in question supports growth. In other words, some substantial portion of discretionary infrastructure funding should reward jurisdictions that work to accommodate their share of growth and should not reward jurisdictions that fail to accommodate growth.

The largest discretionary program at the state level is the Transportation Improvement Board (TIB). The TIB receives 3 cents of the statewide fuel tax, and funds $70 million to $100 million worth of projects per year. To receive TIB assistance (TIB funds average 40 to 45 percent of project cost) local governments apply to one of several programs. The Board then scores applications, using weighted criteria, and awards funding based on these scores. Figure 2 shows the weight given to various project selection criteria for the three major urban-area programs. “Growth and development” is an explicit criterion in only one of the three listed programs, receiving a weight of 15 points out of 100. While the “mobility” criterion can apply to capacity-enhancing improvements, it also applies to actions such as freight mobility, signal timing and street grid completion that mostly benefit developed areas.

The TIB is just one example of the infrastructure assistance programs that should be geared more toward helping local governments accommodate growth. While changing project selection criteria will generate some controversy, it will provide much-needed incentives for local governments to accommodate growth.

4. Assist small jurisdictions with complex processes

Some of the most effective infrastructure funding and financing tools are also the most complex to implement. Small local governments rarely have the staff or expertise to undertake programs like local improvement districts, latecomer fees or various types of bond financing. As a consequence, many funding and financing tools go unused.

Since much of the housing growth in the state takes place in small cities and areas with small utility districts, this administrative capacity gap must be closed. The state, probably through the Department of Community,
Trade and Economic Development, should maintain staff and expertise to assist local governments in setting up complex infrastructure funding and financing programs. In some cases, as will be recommended below, such support programs could devolve to counties.

5. Connect the Buildable Lands program to infrastructure funding

One of the most problematic aspects of the Buildable Lands Process that measures development capacity in six counties is the lack of information about infrastructure availability. Under Buildable Lands, local governments can count as “buildable” land not currently served by infrastructure, and without service on the immediate horizon. So while the land is technically buildable, it can’t actually be used until roads and utilities go in.

For local governments to count land as “buildable,” they should have plans and timelines in place to provide infrastructure to that land. If they cannot do this, such land should not be counted in the inventory of land available to meet housing goals. To meet this sort of requirement, local governments will need to commit part of their long-term funding stream to infrastructure extensions, or plan to use alternate funding methods. In any case, plans to provide infrastructure to buildable lands must have a funding component, and not just be lines on a map. (Washington Research Council, 2005)

6. Extend infrastructure planning and funding time horizons to match growth horizons

Comprehensive plans for land use and development typically extend out 20 years. In contrast, the capital facilities elements and capital improvement programs that provide the infrastructure for those growth plans extend out only six years. Since most development depends on the availability of infrastructure, any land use plans that require infrastructure not included in the current six-year CIP must be considered speculative.

Local governments should extend the timelines for infrastructure planning and funding out to match the timelines of their land use planning. Although funding may be difficult to predict over the long term, local governments actually have more control over that funding than they have over the land uses included in the 20 year plan. Ironically, governments seem willing to commit to long term plans for activities they do not control, while sticking to short term plans for activities they do control. The reverse should apply.

REVENUE STRATEGIES FOR GROWTH

These six principles suggest the following strategies:

Create new Growth Arterial Program at TIB. The central transportation problem for growing cities and counties in the state is the lack of capacity in arterials, and the lack of funding mechanisms to expand and extend the arterial network to accommodate new growth. The state funds the highways system, and developers themselves usually fund the local streets serving their projects. But the main collector arterials get caught in the middle, with their very high cost and limited political constituency.
The state should provide a much higher level of support for construction of arterials in rapidly-growing areas. Such a commitment could be run through a new program administered by the TIB. A new Growth Arterial Program (GAP) would fund only those arterials that need expanding or extending to open new areas for development or to accommodate major infill development. Jurisdictions applying for funding from the GAP would need to demonstrate that they have capacity for new housing and have taken steps to encourage its development. GAP-funded projects could pass through already-developed areas on their way to fast-growing ones. The project selection criteria must make very clear, however, that the GAP cannot fund projects that primarily remedy existing deficiencies. Annual funding for the GAP should be at least equal to the other major TIB programs.

Create a new Growth Utility Program. Urban-level utility service, primarily sewers and stormwater systems, do not exist in a remarkable number of otherwise developed areas. These are often islands of lightly-built residential and commercial land that development has leapfrogged. Without utility service they will remain underdeveloped, even though their location suggests they would be attractive residential or commercial areas. As noted in the section on LIDs, getting utilities funded in these areas remains a major challenge, since many current landowners do not want to pay for service they do not feel they need.

To provide money to extend utilities to infill areas, as well as to newly developing areas, a new Growth Utility Program (GUP) would be established, perhaps administered by the Public Works Board. Like the GAP, the GUP would have funding criteria that require applying jurisdictions to demonstrate that the projects will primarily facilitate new housing growth. Clearly, existing homes and businesses will benefit from the new utility service, but the area served by the new lines should have substantial capacity for infill development.

Tie growth infrastructure programs to Buildable Lands. Both the GAP and the GUP would require cities, counties and utility districts to demonstrate that the projects for which they seek funding will primarily support housing growth, and one way to show the connection is through the Buildable Lands process. In the six counties that must undertake Buildable Lands, jurisdictions must identify all land that can accommodate housing growth, and where, specifically, housing can be built. This process should point to areas that would benefit from infrastructure extensions appropriately funded by the GAP and GUP.

Facilitate Local Improvement Districts. The best way to minimize controversy over infrastructure funding is to ensure a direct relationship between those who pay for infrastructure and those who benefit from it. Local improvement districts or LIDs, accomplish this at the local level by creating special taxing districts consisting only of properties that directly benefit from a new piece of infrastructure. (LIDs have close cousins in road improvement districts and utility local improvement districts – RIDs and ULIDs respectively. The descriptions in this section apply to all variations.) LIDs are especially useful for upgrading old areas where infill would overwhelm existing roads or pipes, and for adding infrastructure, especially sewers, in sparsely-developed areas.
So, why are these tools not used more? A few quotes from the Washington State Local Improvement District Manual provide clues:

*LIDs have a reputation as difficult to administer, time consuming, and a public relations disaster waiting to happen.*

*An LID asks [citizens] to not only put up with a project they may not like personally, and which may disrupt their lives, but also to pay for it.*

*LIDs are complicated and require a cast of thousands.*

*An LID financed project tests an agency’s public relations skills like no other.*

And this from a document meant to encourage and facilitate the use of LIDs! The fact that the Manual covers 114 pages with contributions by authors in six disciplines should provide another clue about the difficulty of undertaking LIDs. (Municipal Research Services Center, 2003)

But despite the apparent difficulty, LIDs offer the best way to unlock the potential for housing in infill settings with fragmented property ownership. Many older sections of urban areas were never laid out by developers as formal subdivisions, and received only minimal infrastructure. These areas can have obsolete housing and commercial property, large or undeveloped parcels, or low value uses, all of which can be converted to housing. But these areas also have small parcels with multiple owners and will see redevelopment and infill on a parcel-by-parcel basis. By spreading the cost of infrastructure upgrades across all property owners and allowing them to pay the cost over many years, LIDs provide a logical way to bring these areas on the market.

The nature of these infill areas suggests that they lie predominantly in inner-ring suburbs that grew outside the boundaries of central cities, with their higher infrastructure standards. As noted in Principle #4, these small suburban cities do not have the staff capacity or money to devote to complex projects like LIDs. So, unless a critical mass of property owners initiates the LID, an underdeveloped area will likely remain that way, freezing out much needed infill housing development.

Technical assistance and expertise from state or regional agencies should be available to local governments and groups of property owners wishing to form LIDs and their cousins. The assistance program could be reimbursable through the overall LID budget, should the project go forward.

To get LIDs moving, local governments should begin to highlight areas that would benefit from LIDs. To begin with, cities and utility districts should map all existing urbanized areas that lack sewer service, and include on those maps the housing growth potential of the area. These maps can be overlaid with logical LID boundaries for sewers, based on drainage basins. Similarly, areas that have multi-family housing potential but lack sidewalks and other basic street-scape amenities, should also be mapped and publicized.

LIDs have traditionally been locally-driven, initiated by property owners to upgrade their surroundings. In the case of infill housing areas, however, leadership will need to come from local government, since current residents may see little benefit from upgraded infrastructure. Promoting and facilitating LIDs in infill areas is a logical part of the implementation of comprehensive plans.
Facilitate latecomer processes. Latecomer processes accomplish the same thing as LIDs, but in a different timeframe and with less involvement by the public sector. In a latecomer process, the first landowner to develop property in an area pays the entire cost of a necessary infrastructure improvement, with all subsequent developers (latecomers) paying their share when they hook a new project into the new facility. The advantage of a latecomer process over an LID is that current property owners do not need to pay anything until they redevelop their property. Latecomer processes work best in areas with a small number of large parcels and developers with deep pockets.

For example, if an area zoned for multi-family housing does not have adequate sewer capacity, the first developer will pay for the larger sewer line in the street. Existing property owners can tie their existing buildings into the new line for free, but if they develop their property and tie an apartment building into the new sewer line, they must reimburse the first developer for a share.

Latecomer processes can also help develop infrastructure in peripheral areas. New subdivisions may be required to upgrade infrastructure under various mitigation programs, but such funding will rarely be sufficient to build trunk systems. Consider, for example, a developer who controls 50 acres out of a 200 acre area. This developer should not be required to cover the entire cost of the arterial and sewer line extensions needed to serve the whole area. The developer may, however, be willing to finance construction of those improvements knowing that the owners of the other 150 acres will pay their share eventually.

This very logical system works quite well – where it exists. The trouble is that, like LIDs, latecomer processes introduce complexities that many jurisdictions do not want, or cannot handle. For latecomers, someone has to decide on the fair shares for all potential users, and someone has to track developments as they tie into the new utility line or use the new streets or sidewalks. This adds up to one more administrative headache for under-funded public works agencies. Faced with administrative burdens, many jurisdictions have not instituted latecomer processes. As a result, developers needing to add infrastructure have two unappealing choices. First, they can pay for the new facility and give all latecomers a free ride. Or, they can wait until another owner goes first and get the free ride themselves, but risk losing the market initiative.

The solution lies in centralizing administrative processes. There is no reason why the assessment and record-keeping functions must remain with the jurisdiction responsible for the infrastructure. These could reside with a county government for all jurisdictions in the county, or be contracted out by a small jurisdiction to a larger, adjacent jurisdiction. An administrative fee added to the latecomer process could cover the cost of these services.

The Legislature should consider requiring all growth management jurisdictions to adopt latecomer processes. If administrative services are available through other governments, or even private or non-profit entities, there should be few other objections. Most developers are willing to pay their fair share of the infrastructure needed by their projects, but they do not want to end up being chumps.

Legalize real tax increment financing. The third of the primary value-capture mechanisms – after LIDs and latecomer agreements – tax increment financing (TIF) has long tempted public works agencies and economic development practitioners in Washington. But since courts have repeatedly declared it ille-
gal under the state constitution, this bootstrap method of funding infra-
structure remains tantalizingly out of reach.

TIF uses the new property tax revenue generated by a project to fund the
infrastructure needed to make that project feasible. This requires close co-
ordination between the local government undertaking the infrastructure
improvements and the developers of the adjacent land. This close relation-
ship has led courts to conclude that TIF violates the state constitution’s
prohibition on the lending of the state’s credit and its prohibition on the
gift of public funds. The 2006 Legislature passed a bill (HB 2673) that
would provide local government further TIF options. At this writing, Gov-
ernor Gregoire has yet to act on the bill.

At this point, the only real solution appears to be a constitutional amend-
ment that explicitly allows a workable TIF program for specific purposes.
The Legislature has attempted such amendments in the past, but voters
have rejected them. With heightened awareness of the need to build infra-
structure, and with a more sophisticated voter information and campaign
structure, a constitutional amendment may have a higher likelihood of suc-
cess than in the past.

Add new criterion for current Transportation Improvement Board urban
programs. As noted above, the Transportation Improvement Board (TIB)
has the largest pool of state money for local infrastructure projects. Figure
2 shows how the scoring system does not place significant emphasis on
infrastructure for growth. A glance through the project lists shows that the
TIB spends most of its funds in already-developed areas, and although the
projects seem worthwhile, few of them add to the state’s capacity to ab-
sorb growth.

The TIB should add a criterion to its current urban programs that measures
the impact of the project on accommodating growth, either in infill situa-
tions or in newly developed areas. The weight given to such a criterion
should be high enough that projects in newly developing areas that cannot
demonstrate improvements in safety, mobility or pavement conditions
(they do not have those problems yet!) can score highly.

The TIB has done an excellent job of providing high-impact funding to
local projects across the state, enabling cities and counties to make expen-
sive improvements. The great strength of the TIB comes from the political
insulation it enjoys and its ability to fund projects that lack strong voter
constituencies. Infrastructure for growth will benefit from those same deci-
sion making qualities.

CAPTURE GROWTH-RELATED TAXES?

A revenue strategy that has received some level of interest is to capture a
portion of the sales, B&O and other taxes collected on construction pro-
jects. Since construction varies so much from year to year, state and local
governments receive unpredictable windfalls which might be dedicated to
infrastructure needed to support that growth.

For example, a modest 2,000 square foot house with a construction cost of
$75.00 per square foot would yield $9,000 in sales tax to the state, and up
to $4,400 to various local governments. That home would also yield B&O
tax from all of the various contractors. $1 million luxury homes and high rise condominiums would, of course, yield far more. In periods of rapid growth, these taxes add up to quite a lot of additional revenue to governments.

The challenge of structuring a growth-related revenue program will be to ensure that it captures windfalls while not hampering the ability of state and local governments to catch up on reserves and emergency funds during periods of revenue growth.

CONCLUSION: FREE MONEY . . . ALMOST

Much of politics involves decisions about the gathering and allocation of public resources for varying and competing purposes. As this brief and the previous one have discussed, funding for the infrastructure needed to accommodate growth does not tend to fare well in this political game. The noise of today’s problems and today’s constituencies will usually drown out the weak cries on behalf of tomorrow’s residents. Absent the sorts of federal commands and money that built the Interstate freeway system, state and local governments will find their hands full just meeting the infrastructure needs they see today, and will have few resources left for future needs.

This brief proposes to fund the infrastructure needed for future growth using two sources. First, state and local governments need to tap into the windfall revenue generated during periods of rapid housing and commercial development. Second, local areas and projects need better tools and assistance to capture the property value and utility that infrastructure creates. Both of these sources of funds tie directly to growth itself – no growth means no money, and rapid growth means money will be available. Governments should not rely on such sources for general operating purposes, but infrastructure programs can use them.

###
REFERENCES


